Famous Artists Course

Famous Artists Schools, Inc., Westport, Connecticut

Studio procedures

Lesson **21**

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Today's commercial artist is a master of many skills. Here, surrounded by the tools of his profession, and with a sound knowledge of studio procedures, he is equipped to meet virtually all the challenges of an endlessly varied and important job.

Studio procedures

Many of our most famous artists began their careers at the drawing boards of commercial art studios. It was here they served their apprenticeship and gained valuable experience and know-how in studio procedures. Slowly, through trial and error, they learned the many skills that are necessary in the art world today, and acquired the discipline which formed the strong foundation for their creative talents.

This lesson will help you to short-cut your studio apprenticeship and make your start as an artist easier. Here you will learn techniques of preparing art work and photographs for reproduction, and the pitfalls to avoid. You will be given advice on how to crop pictures and present them attractively. Rescaling is another important art job, and you will be taught how to enlarge or reduce drawings and layouts in a time-saving professional manner. You will also learn the language of the typographer, and how to turn typewritten copy into good, readable typographical arrangements.

A sound knowledge of these and the many other studio procedures we teach you here can be the best way to open the door to your art career. It can provide you with a good livelihood even while you are still learning.

Accuracy — accuracy — accuracy!

Almost all commercial art work is designed for reproduction. It is well to remember that your own art work will be reproduced as you prepare it, including your mistakes — so learn your trade! Study the results of every job you do after it is reproduced. Pick it apart and think about it. In this way you can learn something from every job.

If there is one word that should be foremost in the mind of the studio artist it is accuracy. Speed is very important in the commercial art world, but accuracy must come first. If a job is not accurate in the beginning, everything that the artist does from that point on will be wrong.

Good tools are important

In the artist's effort to achieve accuracy, nothing is as important as reliable tools. Money spent on tools of good quality is a sound investment. Inferior tools turn out inferior work, and the artist's job is demanding enough without being complicated by tools of questionable performance. So always use the best ones you can afford and take good care of them.

The drawing board upon which the artist works has a great deal to do with the quality of the job he turns out. The soft wood in the top of the board is easily scarred, so don't use yours as a cutting surface, but save old pad backs for this purpose. Next, don't rely on the edge of your drawing board as an accurate guide for your T-square. A simple metal edge called a "true-edge" can be purchased from your local art store and easily clamped to the left side of your drawing board. This makes a smooth, accurate plane on which the head or crosspiece of your T-square can ride.

The T-square, of course, has much to do with the accuracy of your job, and it is a wise artist who purchases a good steel T-square at the beginning of his career. Given reasonable care, such a tool will last a lifetime. The T-square is used for all horizontal ruling. Don't use it against the top edge of your drawing board for making vertical lines. This is a job for your triangle.

Most professionals find that two or even three different sizes of triangles are necessary to handle a variety of work accurately. For greatest accuracy over many years, it is well to have one or two steel triangles. Plastic triangles have the advantage of transparency, but they do have a tendency to lose their accuracy and easily become nicked.

A constant offender is the old-fashioned wooden ruler. Many artists have had the experience of completing a piece of art only to find that it is a little short — or too long, as the case may be. When this happens it is often due to a poorly made, inaccurate ruler. You can avoid such mishaps by purchasing a good twenty-four-inch steel ruler at the start.

Neatness

Next to accuracy, one of the most important qualities an artist can possess is cleanliness. Nothing is so irritating to the art buyer as a careless-looking piece of work covered with smudges and finger marks. And, similarly, nothing will impress him more than a sharp, clean-looking job. Develop the habit of neatness early in your career. See to it that your place of work is neat and tidy, with everything in its place. An occasional washing with soap and water will keep your T-square, triangles, and ruler clean — and thus, too, the art work you produce with them.

Mechanical aids

Many mechanical aids have been developed which will save time for the artist who has deadlines to meet. Three of the most commonly used timesavers are the camera lucida, the pantograph, and the opaque projector. On the following pages we will show you how to use them. We will also explain the use of other time- and money-saving devices such as the photostat and silverprint, and art processes such as Craftint and Zip-a-tone. These mechanical aids will often prove useful, but they should never be used as a substitute for good drawing.

The things we will teach you in this lesson are what you would learn over a long period of time, working in studios and art departments as an apprentice. We will demonstrate the professional approach, but remember, every studio does its work in a certain way. It is up to you to adapt yourself to your studio's methods cheerfully. The knowledge you gain by a thorough study of this lesson will help you to progress more rapidly in any studio and turn out studio art of the best professional quality. You will know the tools and procedures. The art materials and processes will become old friends, and you will be ready to meet new challenges with the understanding and versatility that are always the mark of the good craftsman.

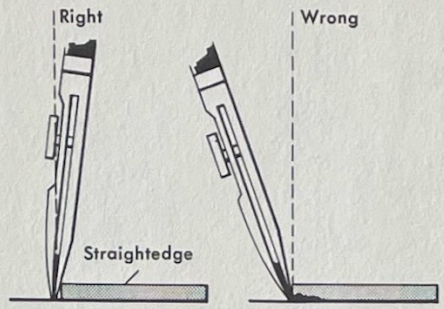
Tools of the trade

Fine mechanical drawing instruments are a joy to work with. They respond sensitively to the touch of the artist and help him to meet the exacting demands of his profession. It pays to buy a set of good quality . . . with proper care they will last a lifetime. By contrast, a cheap set of instruments will often cost more in the long run. They not only turn out work of inferior quality, but must be replaced sooner or later. It is far better to start with a good set. You don't have to buy the entire set at once, either. You might start with the purchase of a good ruling pen, and follow that with a combination pencil and ink compass, eventually other instruments, till you have an entire set.

The ruling pen is commonly used for inking straight lines. It is designed to be used against a straightedge and rules lines of consistent thickness. The thickness of line may be varied by turning the adjusting screw, which moves the nibs together or apart. On these pages we will demonstrate the basic handling and care of this and other drawing instruments.

Ruling pen

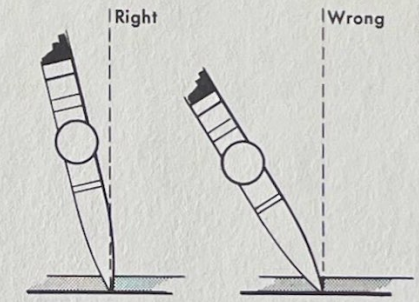
Side view



Hold pen tilted slightly back.

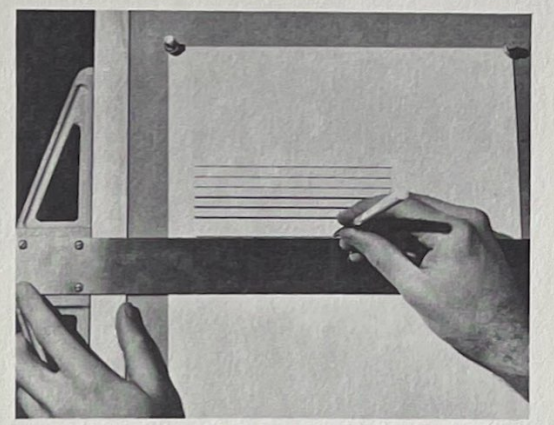
Don't tilt pen forward—ink will run under straightedge.

Front view

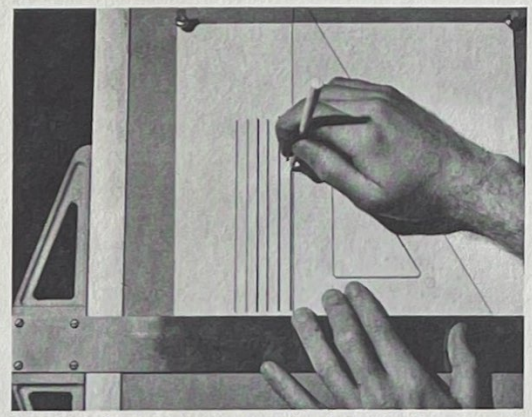


Hold pen tilted slightly.

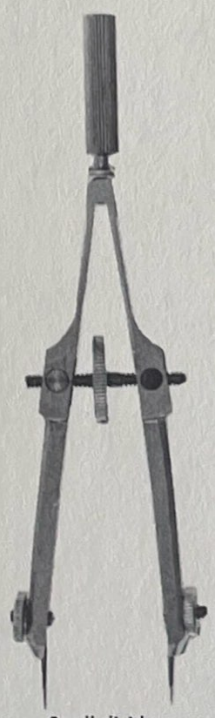
Don't tilt too much—point makes poor contact.



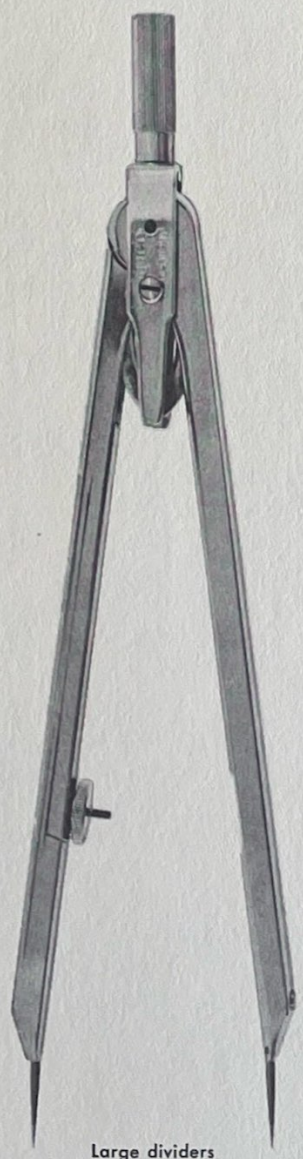
With your T-square held firmly against a true-edge, practice drawing horizontal lines with your ruling pen. Hold the pen in an almost vertical position and draw it firmly from left to right against the T-square—or, if you are left-handed, do it from right to left.



For vertical lines, place a triangle above the T-square and draw your ruling pen up (away from you) against this edge. Practice drawing lines of various thicknesses.



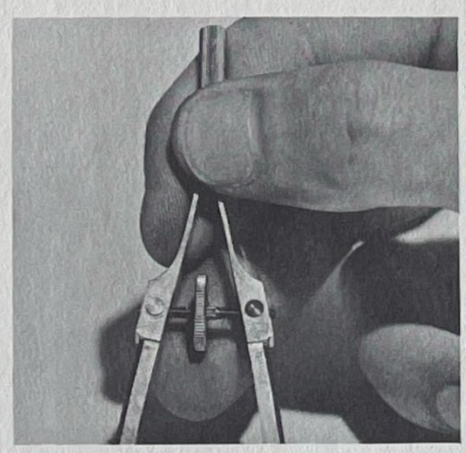
Small dividers



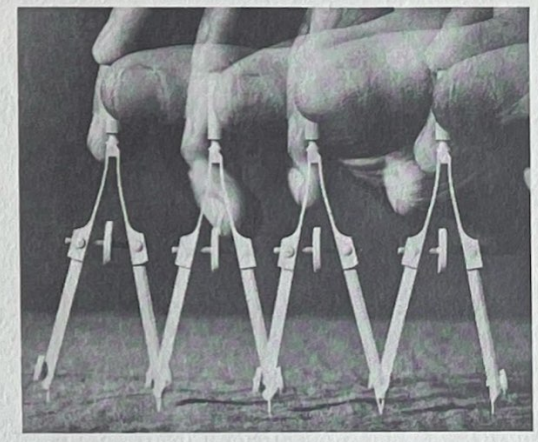
Large dividers

Dividers

Most sets of drawing instruments contain two dividers—large and small. The small dividers open to about an inch and a half; the large dividers are used for anything larger than that up to about eight inches. Dividers are used for dividing lines, either straight or curved, into equal segments. They are also often used for transferring measurements from one drawing to another. A little practice will soon acquaint you with the usefulness and handling of your dividers. In the demonstrations below we use a small pair of dividers, but the handling is basically the same for both sizes.

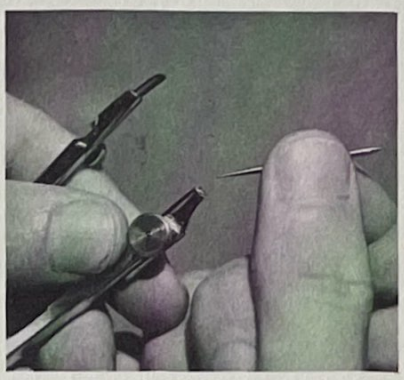


To adjust the small dividers, hold the tip between your thumb and index finger. This leaves your center finger free to open or close the dividers with the wheel. In this way, even a delicate adjustment can be made with one hand.

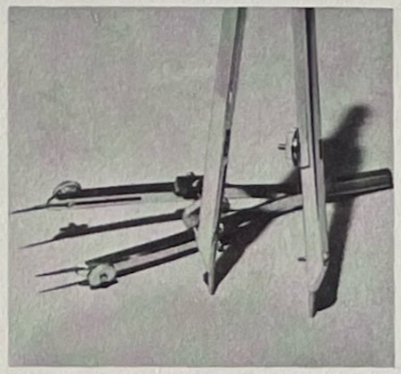


This demonstrates the movement of your fingers as you divide a line into equal segments. Your index finger pushes down lightly on the dividers as you twirl them between thumb and center finger. It is not necessary to push the points of the dividers far into your drawing paper.

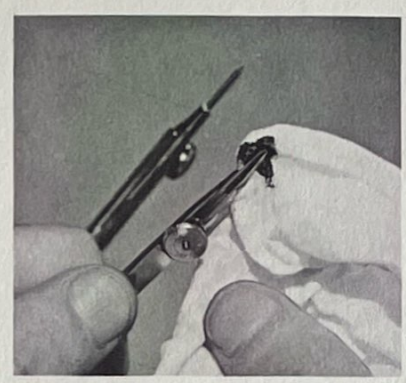
Tips on care and use



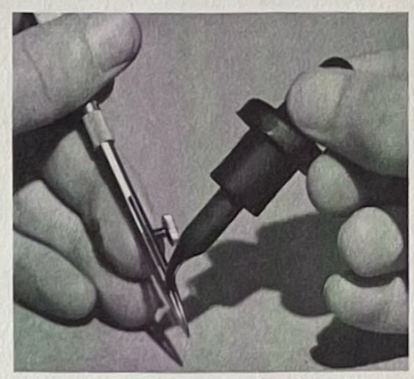
Replace broken or bent points at once. Extra points are provided with many sets. If not, they can be purchased from your art dealer.



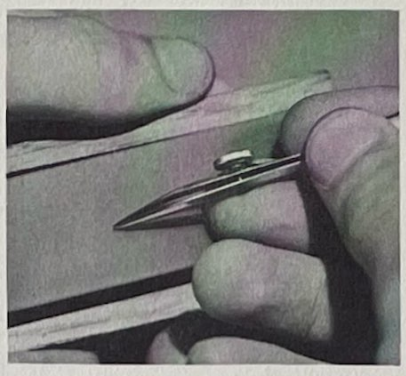
Points on dividers and compass should be sharp. But if you stick them into your drawing board, as shown here, they won't be sharp for long.



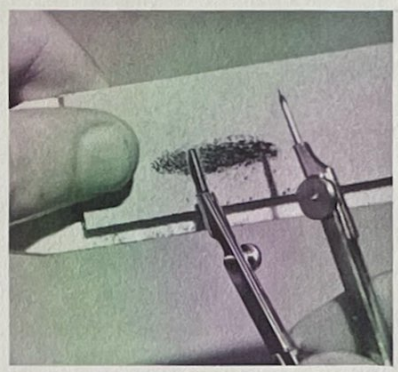
Keep your ruling pen and your ink compass clean by wiping them with a lint-free cloth after each use. If dried ink deposits form, soak the nibs in ammonia and water.



Do not dip ruling pens or ink compasses into the ink bottle — use the filler in the bottle top or a brush filled with ink. "Fine-line" ink works best in these instruments.

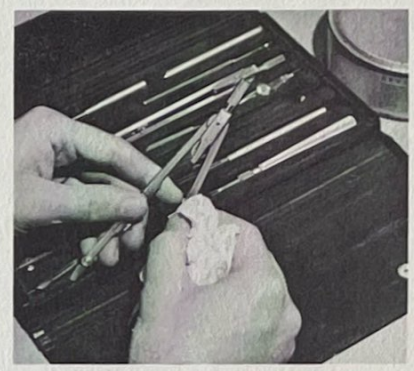


Ruling pens should be sharpened occasionally as they wear. Use a small, very fine oilstone for best results.



For more accurate work, sharpen the pencil points of your compasses often, using your sandpaper block.

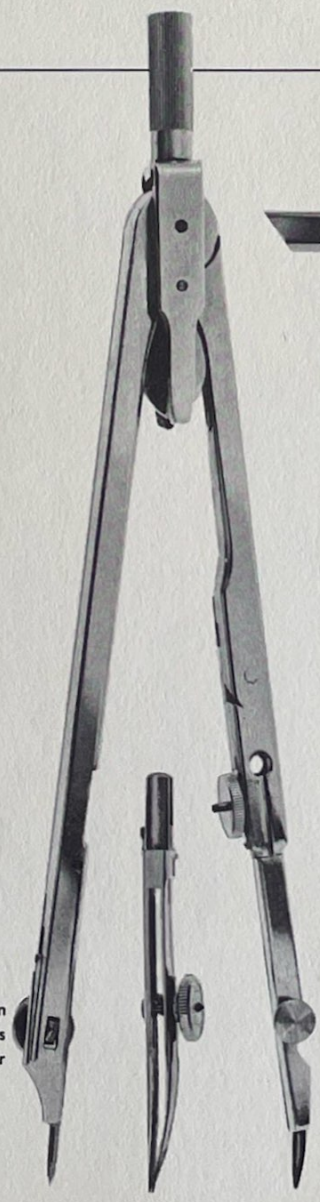
Your instruments will always work better if they are kept tight. A screw driver is usually provided for this purpose with the set.



When your instruments are not in use, keep them in the case. A thin coat of wax will help preserve them and keep them rust-free.

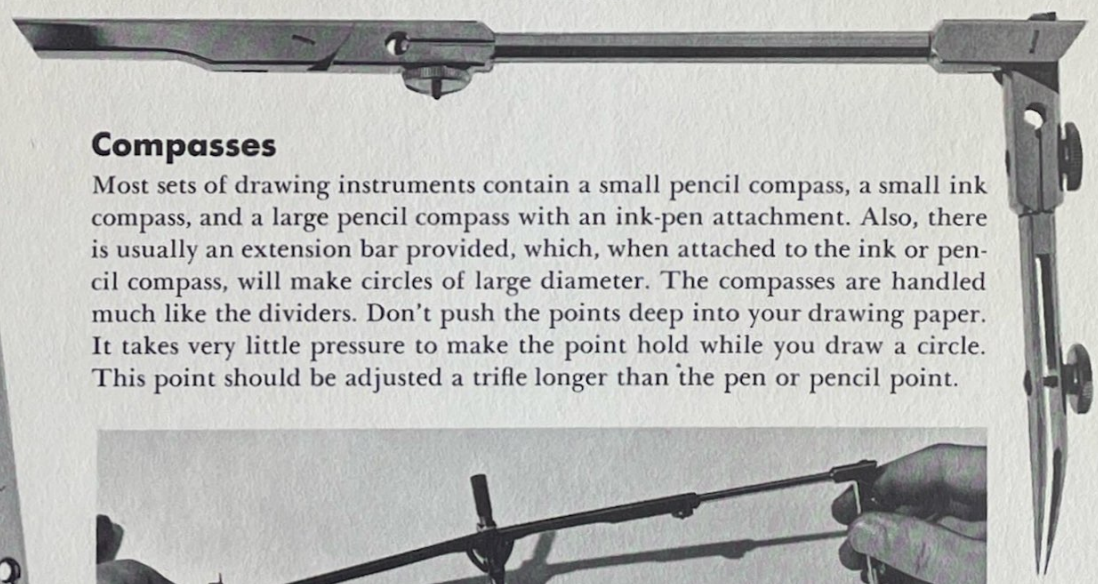
Small ink compass

Small pencil compass



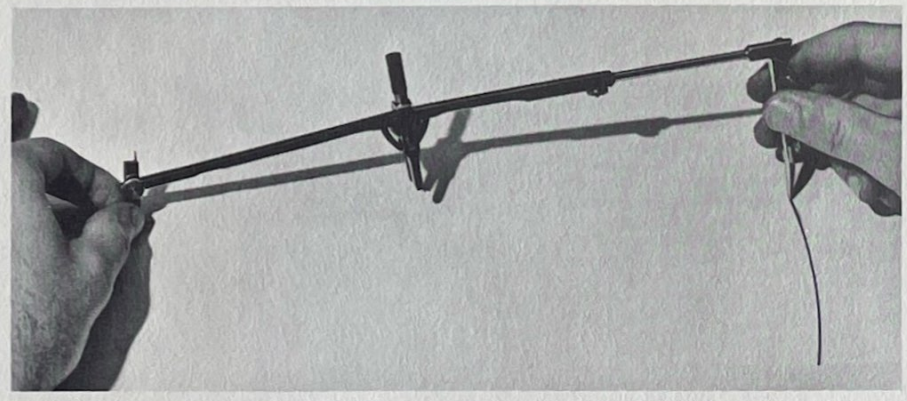
Large combination pen and ink compass with extension bar

Extension bar



Compasses

Most sets of drawing instruments contain a small pencil compass, a small ink compass, and a large pencil compass with an ink-pen attachment. Also, there is usually an extension bar provided, which, when attached to the ink or pencil compass, will make circles of large diameter. The compasses are handled much like the dividers. Don't push the points deep into your drawing paper. It takes very little pressure to make the point hold while you draw a circle. This point should be adjusted a trifle longer than the pen or pencil point.



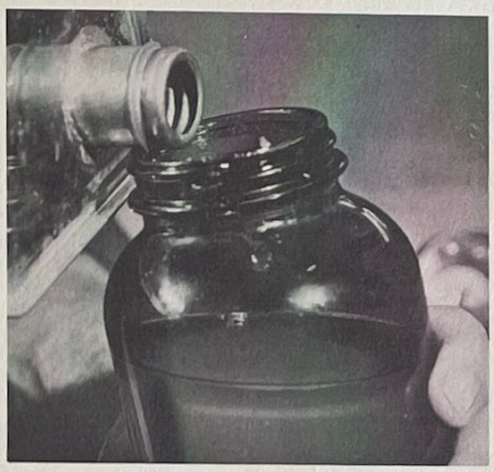
When used with the extension arm, the compass requires two hands. One holds the point of the compass and the other holds the inking pen or pencil. With a little practice you can become quite adept at this operation.

Rubber cement–a tool of many uses

One of the most important tools for the commercial artist is rubber cement. While there are many adhesives used in the commercial art field, none has the versatility, ease of handling, and downright friendliness of rubber cement. Certainly none is so easy to remove. If you go beyond the edge of an area in cementing, you simply allow the rubber cement to dry and rub it off. It can be removed from almost any surface without leaving a mark.

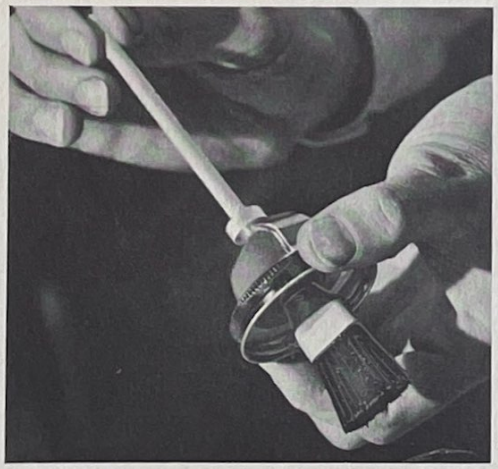
Pieces mounted with rubber cement can be adjusted or removed by applying rubber-cement thinner along the edges. The thinner seeps under the edges and loosens the cement. Many artists keep an oil can or squirt can filled with thinner for this purpose. Equally handy is a small bottle with an eye dropper. Rubber cement and thinner are highly flammable. Never smoke while using either of them.

There are two basic ways of mounting with rubber cement. One is wet mounting, the other is dry mounting. Both methods are demonstrated on the following pages.

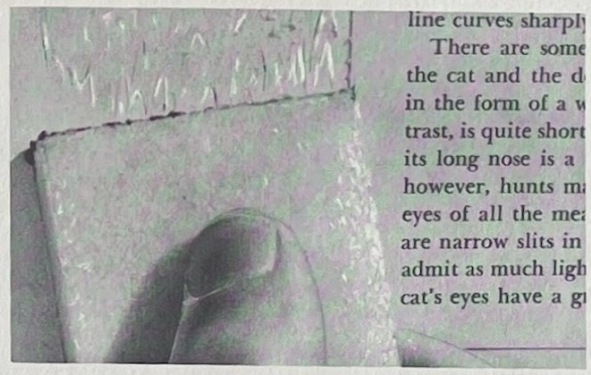


1
Rubber cement is easier to handle when it is thinned to the consistency of honey. To do this, fill your rubber-cement jar (dispenser) about two-thirds full with the cement and fill the remaining space with thinner. This proportion may vary with the artist's preferences.

2
The most commonly used rubber-cement dispenser has an adjustable handle. By loosening the nut on the top of the lid, you can push this handle in or out. Now, with the brush pushed deep into the jar, thoroughly stir the thinner into the cement.



3
Adjust the handle by pulling it up until the bristles of the brush are almost covered with rubber cement — then tighten the nut to hold it. If your brush is kept at this level, you'll find the cement easier to control when you take out the brush.



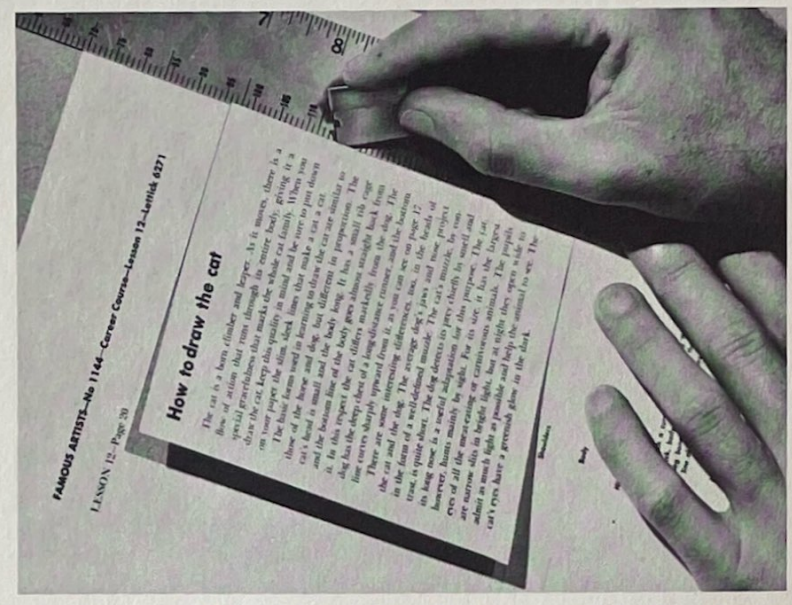
line curves sharply
There are some
the cat and the d
in the form of a w
trast, is quite short
its long nose is a
however, hunts m
eyes of all the mea
are narrow slits in
admit as much ligh
cat's eyes have a gr

4 A rubber-cement pick-up may be purchased in any art store, or you can make your own by pouring rubber cement into a small receptacle and letting it dry. It is used to pick up excess dried cement. To remove the cement, rub the pick-up gently over the dried cemented area. Lumps of dry rubber cement which form on your pick-up can be cut away with scissors.

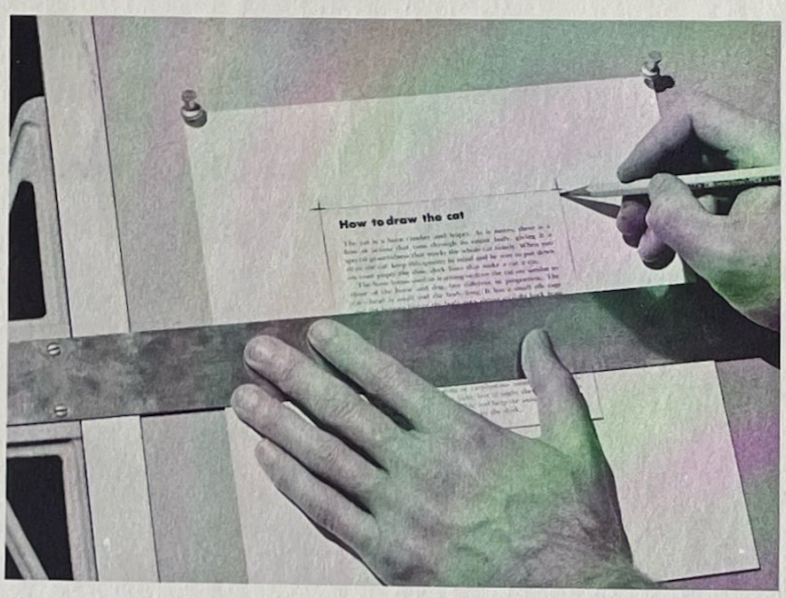
Wet mounting

When mounting type proofs in position, many artists use the wet-mount method. In this method rubber cement is applied only to the underside of the proof and, while the cement is still wet, the proof is placed in its approximate position on the layout or mounting board. (Mounting board is usually an inexpensive mediumweight white cardboard.) Then the proof is gently moved into the exact position, using the T-square as a guide. Use your fingers or the eraser end of a pencil to move the proof. The points of dividers are often used, but these leave pin pricks, and only experts can use this tool without damaging the paper.

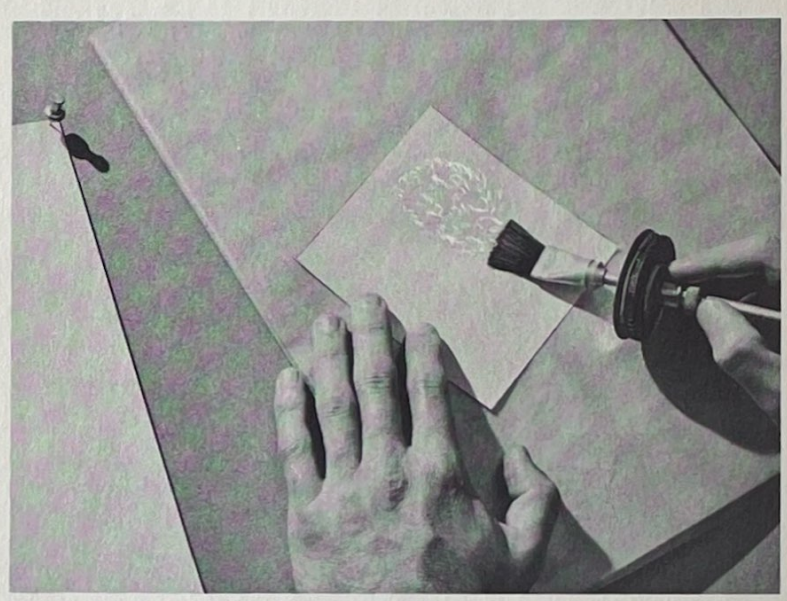
In handling type proofs, take great care not to smudge the print, especially in rush jobs when the ink has not had time to dry. A light spray of Acrylic fixative will protect the proof – but be cautious! Too heavy a spray may blur the print.



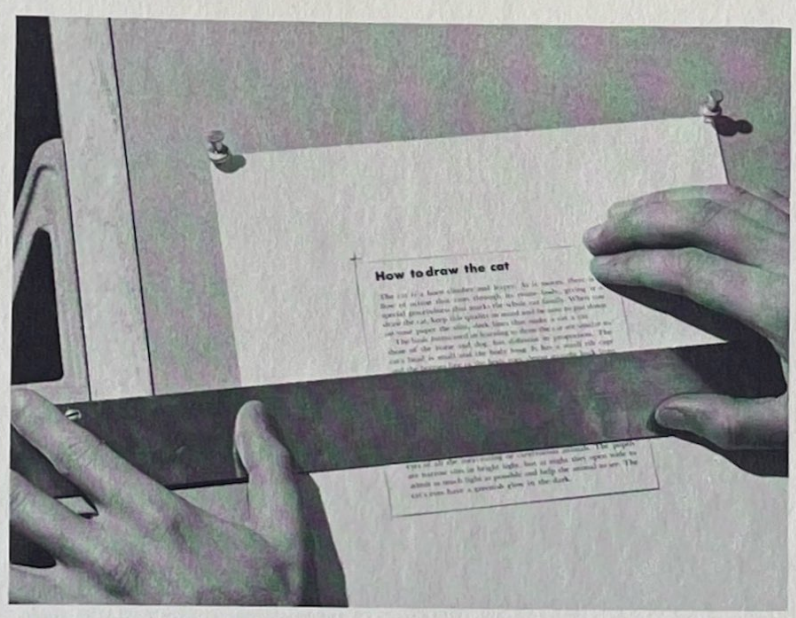
1 Use a sharp razor blade or X-acto knife to trim the type proof, leaving at least a 3/8-inch margin on all sides. For this demonstration the proof will be mounted on mounting board.



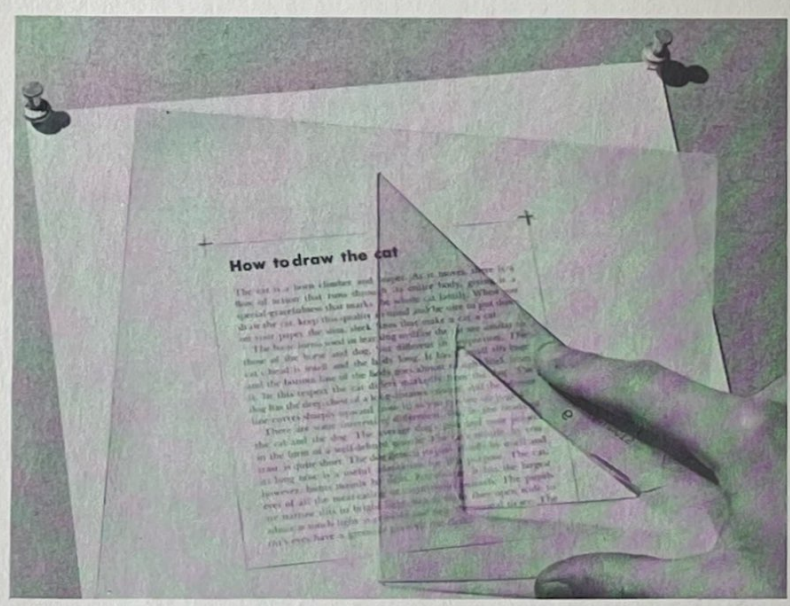
2 Use the T-square to line up the mounting board, and tack it firmly to your drawing board. Then line up the proof and lightly mark the position of the top corners on the mounting board.



3 Turn the proof face down on a tissue or tracing pad and coat the back with rubber cement. With a little practice, you will soon know how much cement to apply.



4 While the cement is still wet, position the proof between the corner marks and square it up with the aid of your T-square.

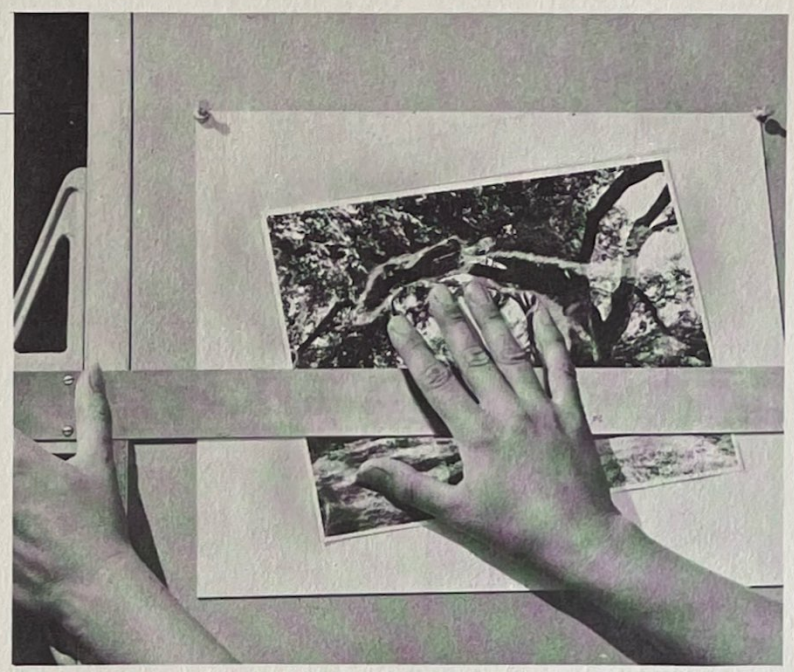


5 Place a tissue over the proof and, with the edge of a triangle, press the proof flat. This squeezes out the excess rubber cement, which is rubbed away with a pick-up.

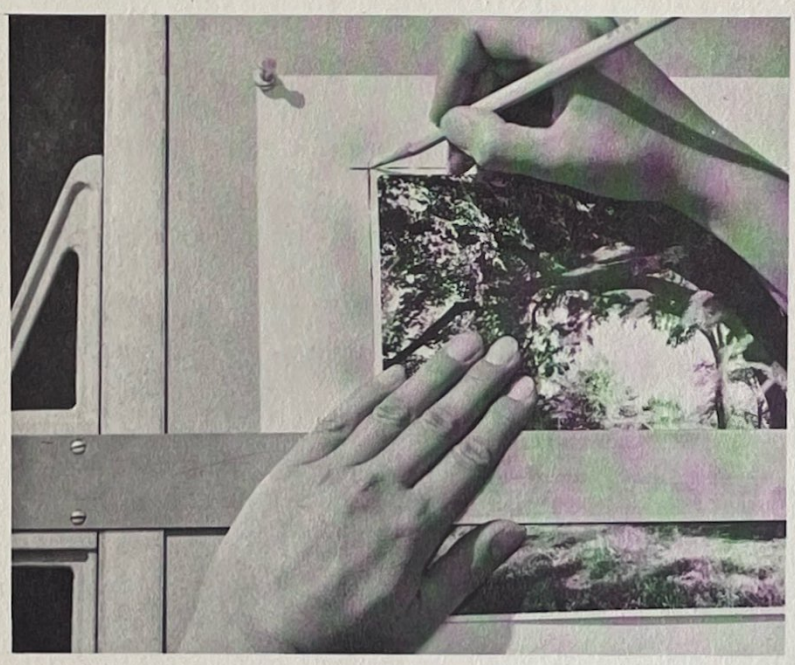
Dry mounting

This method is often used for mounting photographs, type proofs, and art work. Although not completely permanent, dry mounting holds well and is quite easy to do. To dry-mount, you apply cement to both mounting surfaces. When the cement is thoroughly dry, the two surfaces stick instantly upon contact. To keep the two cemented surfaces apart while positioning, a transparent tissue (called a slip sheet) is placed between them. When the position is correct, the slip sheet is gradually withdrawn and the surfaces are pressed firmly together.

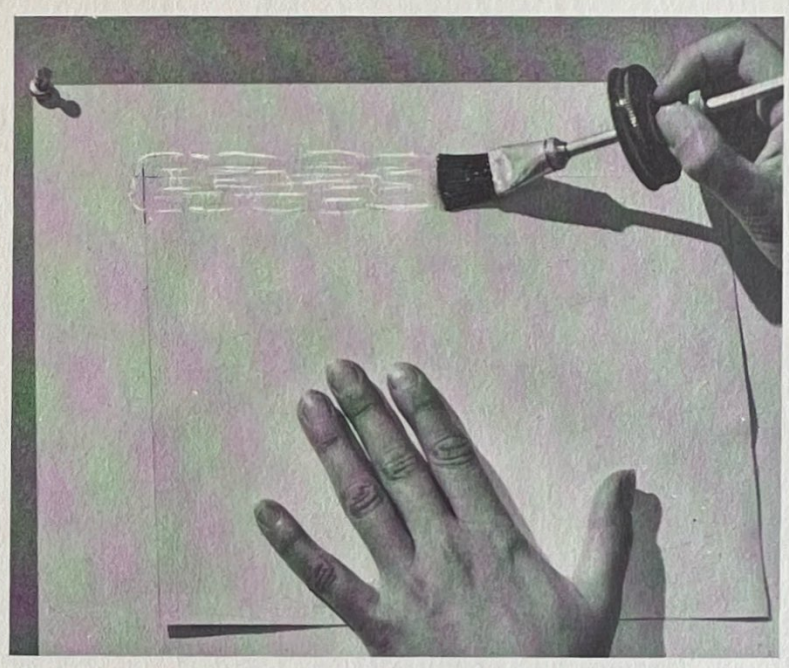
Here we demonstrate dry mounting with a single slip sheet — which is most often used to attach small or medium-sized work to a backing such as mounting board or illustration board.



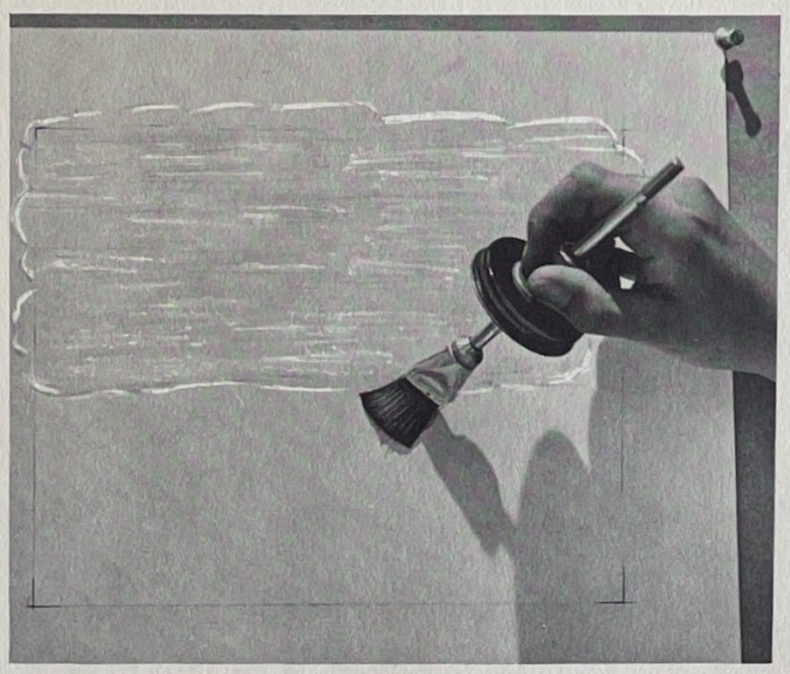
1 First, tack or tape a piece of mounting board to your drawing board. Then, by eye or with your T-square, line up evenly the piece to be dry-mounted — in this case a photograph — with equal margins on both sides.



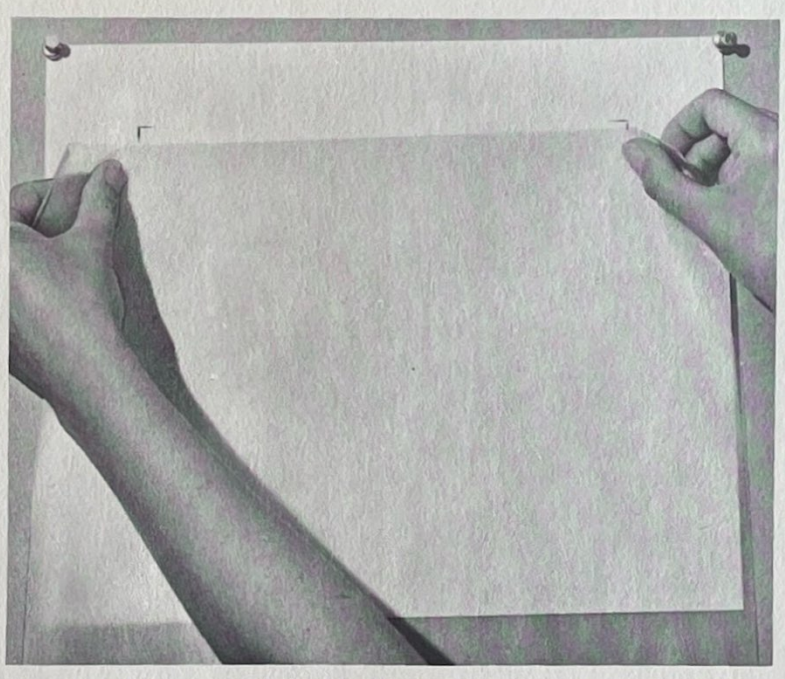
2 Now lightly mark the positions of the four corners on the mounting board so the photo can be relocated in this exact position after you coat both mounting surfaces with rubber cement.



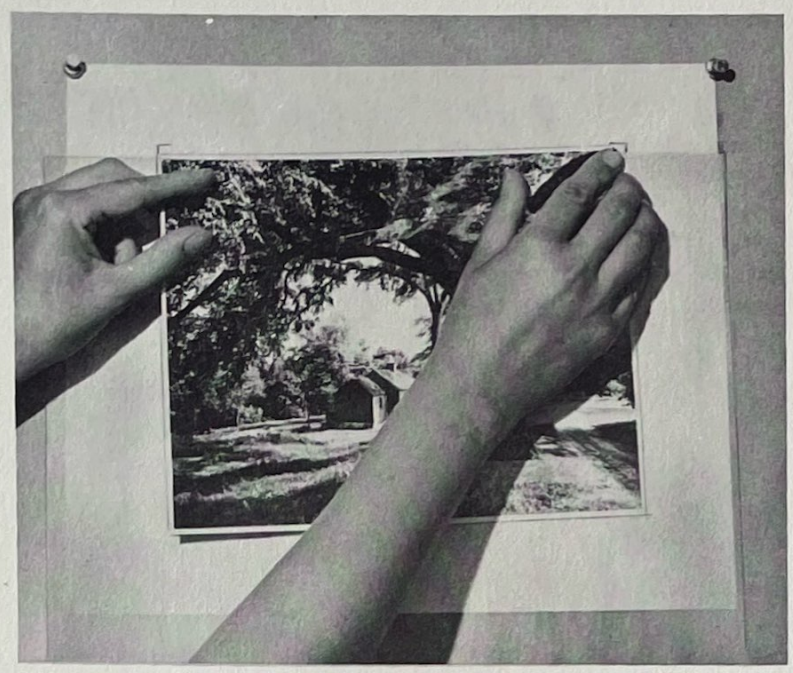
3 Turn the photo face down within the corner marks and thoroughly coat its back with rubber cement, running over the edges of the photo and onto the mounting board. Apply cement evenly — lumps of dry cement under your photo will show.



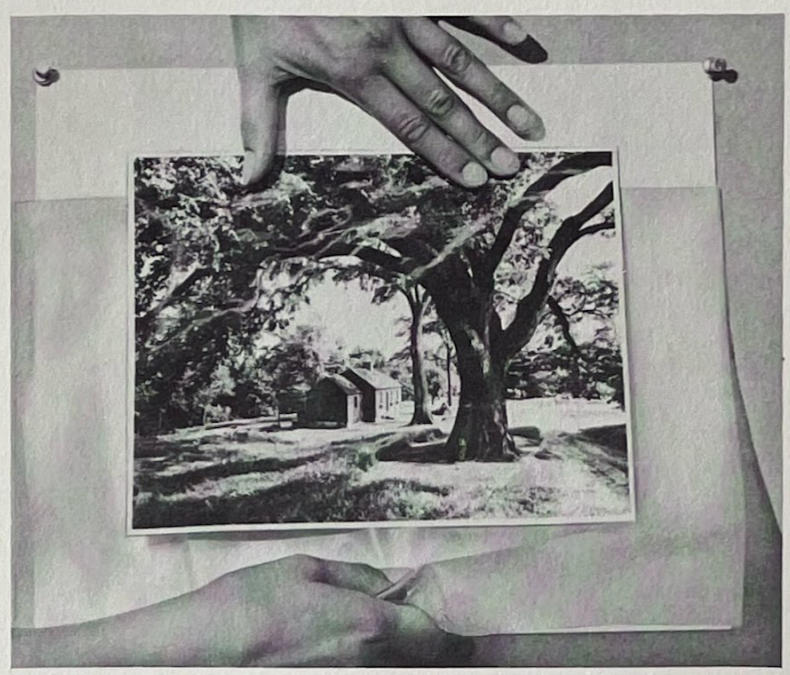
4 Set the photo aside to dry and put a similar coat of rubber cement on the mounting board within the corner marks. You'll have a guide line where the rubber cement ran over the photo edges.



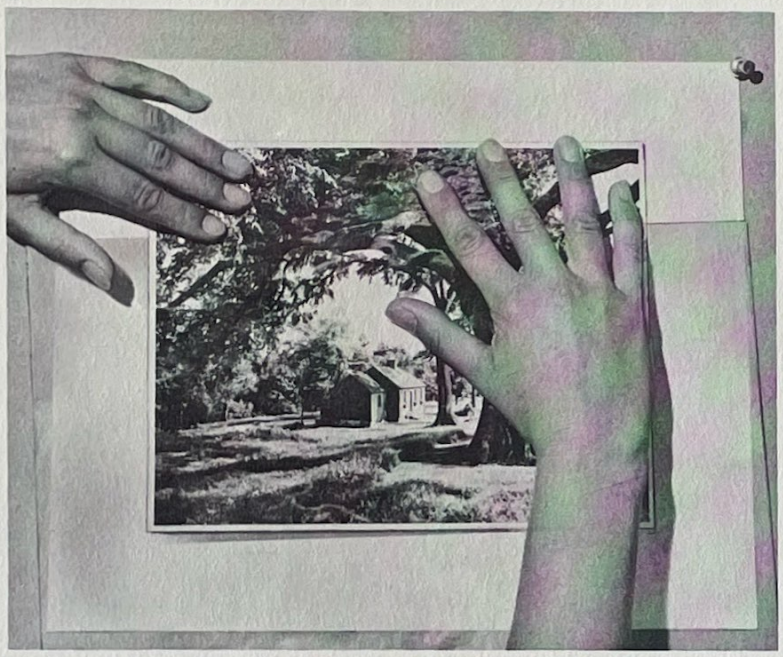
5 When the rubber cement on both surfaces is thoroughly dry, put a slip sheet of clean tracing paper about one-quarter inch below the top corner marks. This sheet will prevent the entire photo from sticking to the mounting board while you are positioning it.



6 Place the photo over the slip sheet and position it exactly within your corner marks, pressing it firmly on the quarter inch of exposed, cemented mounting board at the top.

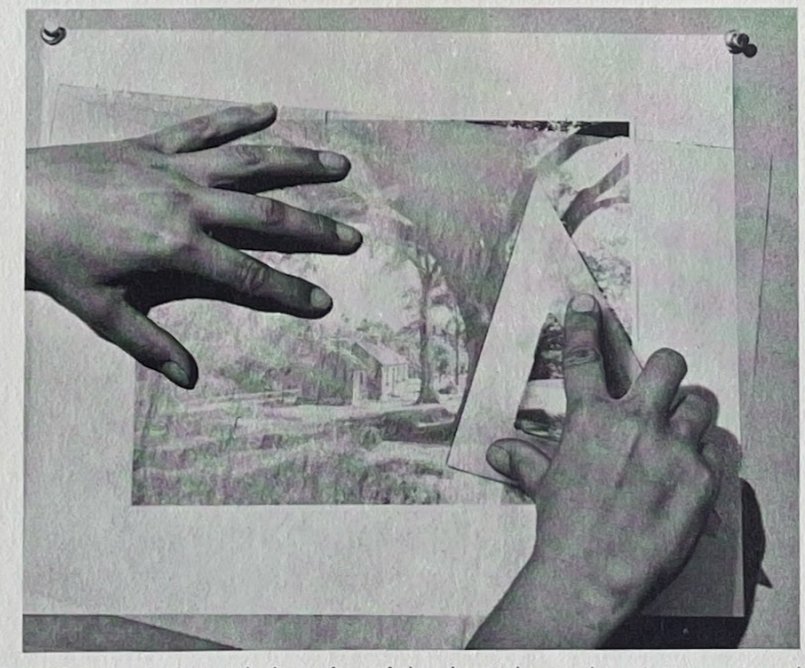


7 Hold the photo along the top edge to keep it from slipping and begin to withdraw the slip sheet gently, thus exposing another cemented area underneath.

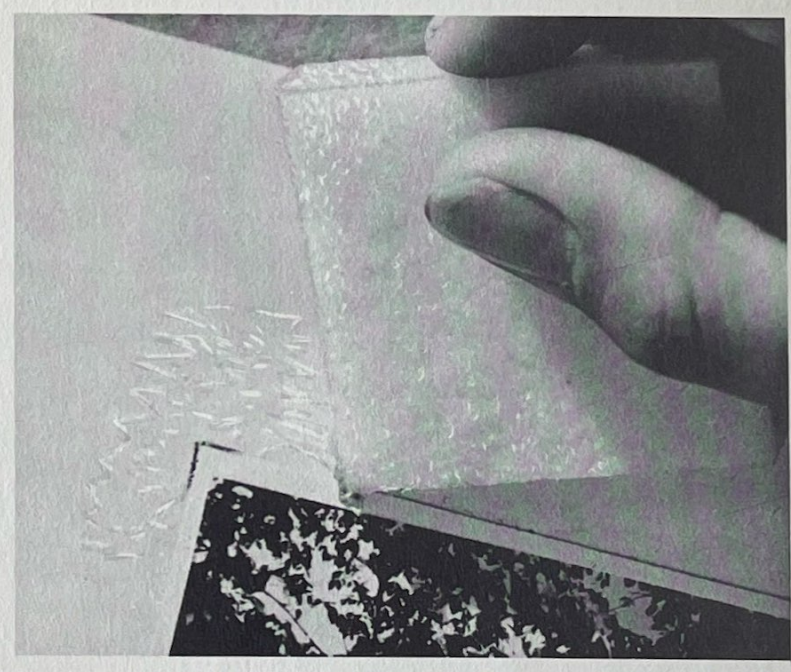


8 Now, within this newly exposed area, smooth the photo onto the dry rubber cement with the tips of your fingers or a wad of cleansing tissue. Work gently — from the center toward the edges.

9 Continue to withdraw the slip sheet and press the photo gently onto the dry rubber cement until the slip sheet is entirely withdrawn and the whole photo "tacked" down.



10 So that you don't scratch the surface of the photo, place a clean tissue over it, and draw the edge of a triangle across the tissue, pressing the photo down flat.

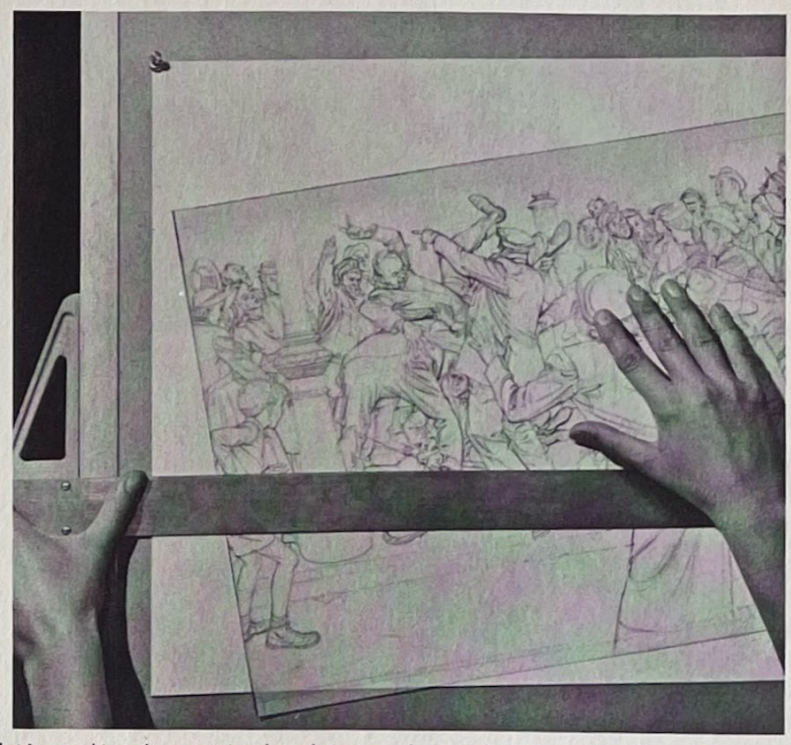


11 Remove the tacks and, with a rubber-cement pick-up, clean away every speck of dry excess cement. Your photo is now dry mounted.

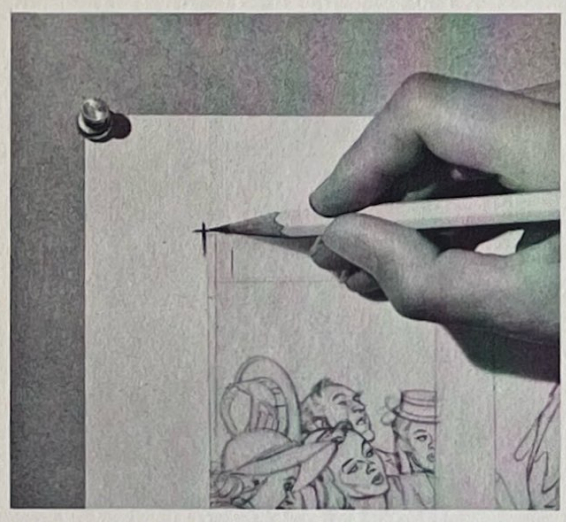
Double slip-sheet method

There may be times when you are asked to mount large pieces of art, photographs or photostats, or perhaps large drawings made on very flimsy paper – perhaps even tracing paper. This would be very difficult with the single slip-sheet method described previously, but using two slip sheets divides the work area and makes it much easier to handle.

For this demonstration we used a pencil drawing on tracing paper. First we sprayed fixative on the drawing and trimmed off some ragged edges. Notice that on larger surfaces we use a larger rubber-cement brush, which makes the job faster and easier.

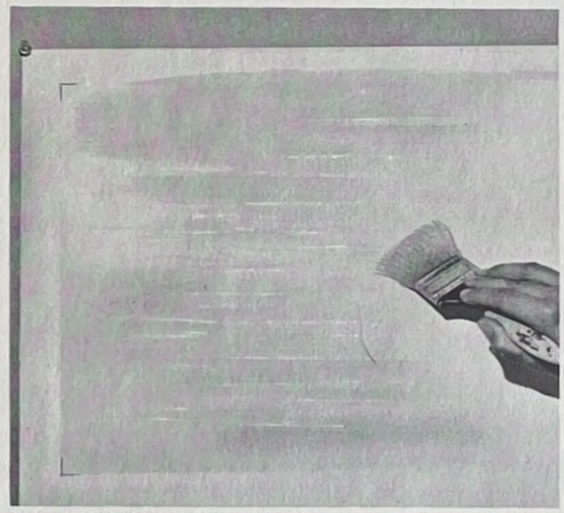


1 After tacking the mounting board to your drawing board, position the tracing-paper drawing by eye or with your T-square and ruler.

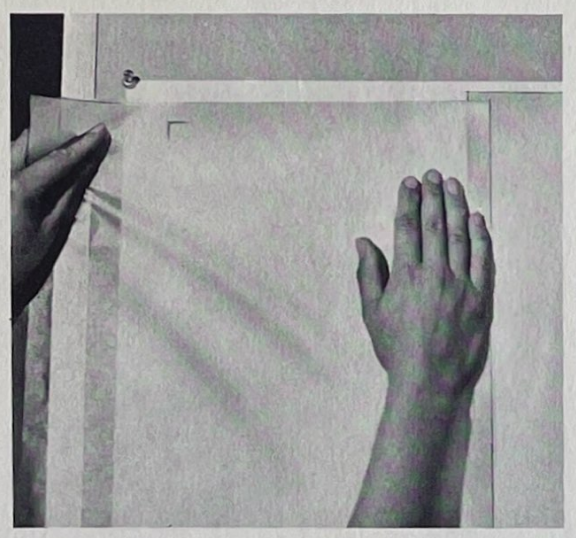


2 On the mounting board, mark all four corners with light pencil strokes so you can easily reposition the drawing after you move it.

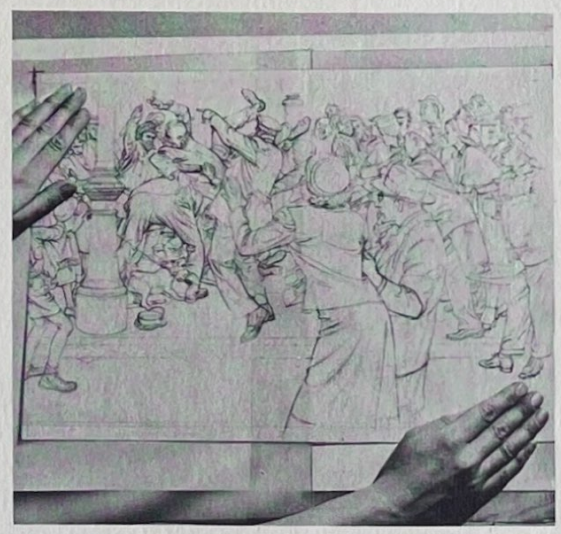
3 Turn the drawing face down and liberally apply rubber cement. Cover the entire back surface and let the cement run over the edges a little onto the mounting board.



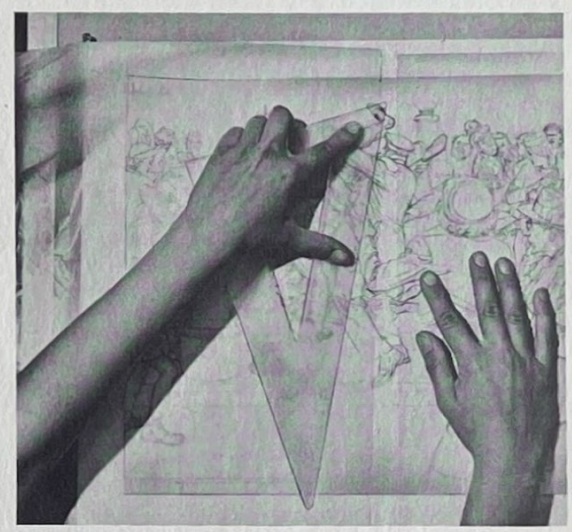
4 Set the drawing aside to dry, and coat the mounting board evenly and thoroughly between the corner marks. Use the border formed by excess rubber cement for your guide lines.



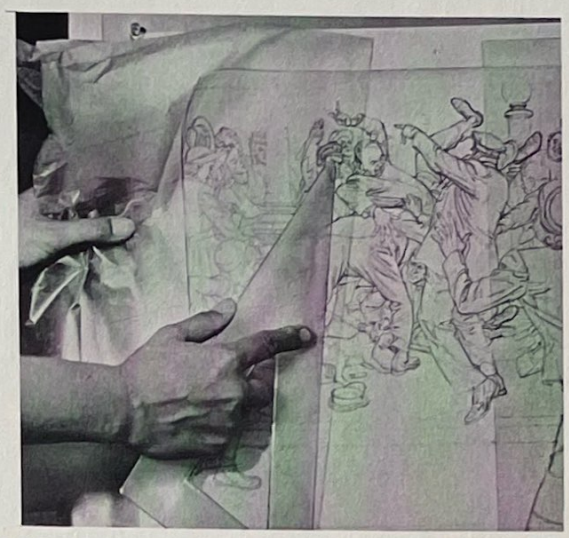
5 After the rubber cement is completely dry, place two slip sheets side by side over the mounting board. Bring them over all four corner marks, entirely covering the rubber-cemented area.



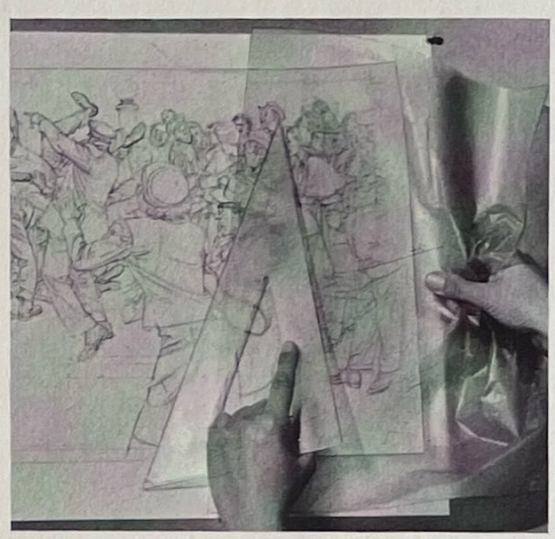
6 The slip sheets should overlap slightly in the center. After making sure that the rubber cement is completely dry on the drawing, position it face up on top of the slip sheets, exactly within your corner marks.



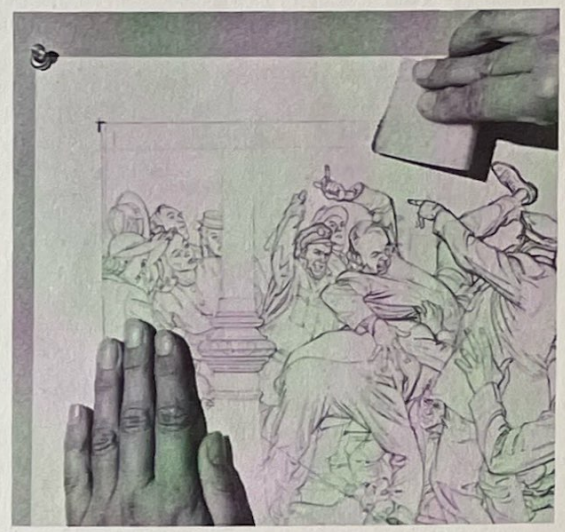
7 Now hold half of the drawing firmly with one hand and begin gently to withdraw the slip sheet under the other half until the two rubber-cemented surfaces come together along a strip in the center about half an inch wide.



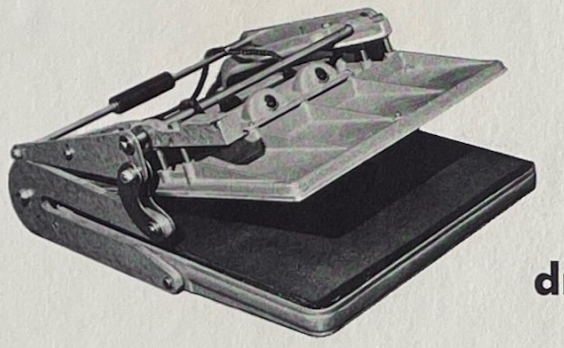
8 Smooth this strip down with a triangle and continue to alternately pull and smooth until this half of the drawing is entirely cemented down. Special care at this point will produce a smooth job with no wrinkles.



9 Repeat the same procedure on the other side of the drawing, alternately pulling and smoothing until the second half is firmly cemented.



10 Using your pick-up, clean off all excess rubber cement. Be careful not to rub too vigorously on the edges of thin papers because you might wrinkle or tear them.

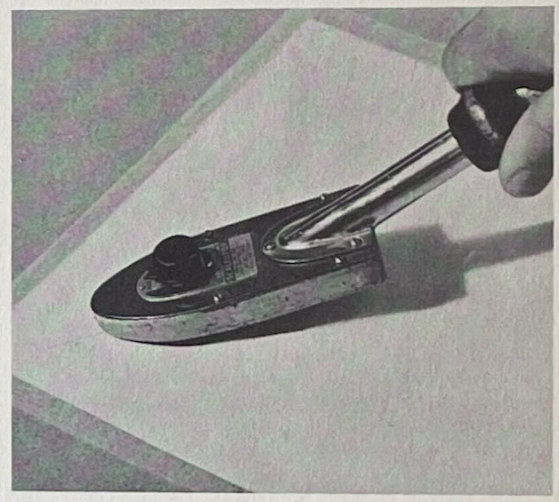


How to use the dry-mounting press

The dry-mounting press is employed by many art and most photographic studios for clean, fast mounting. The adhesive used is a thin sheet of translucent material called dry-mounting tissue, which dissolves under heat and adheres to and binds both surfaces. The sheets come in several sizes.

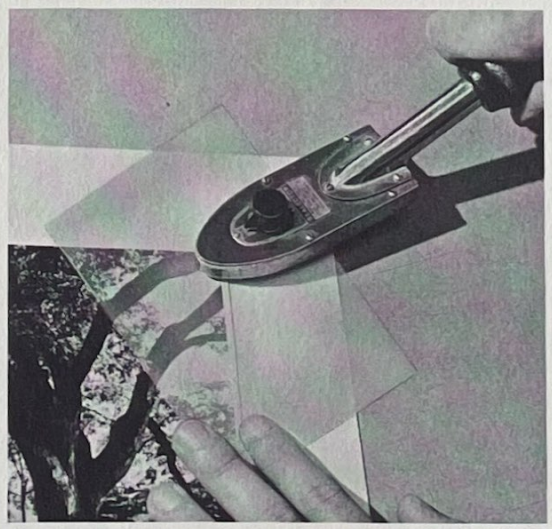
Quite often you may need to use several sheets of dry-mounting tissue for a single job. When this is the case, take care not to overlap your sheets. The pieces should butt or even have a thin space between them — if you overlap them an annoying seam may show.

This method of dry mounting is used on photographs, photostats, tear sheets, and almost any paper light enough in weight for heat to penetrate. It requires the use of an electric "tacking iron" to fasten the work temporarily in place, plus an electric dry-mounting press to supply heat enough to dissolve the dry-mounting tissue and furnish sufficient pressure to bind the two surfaces together.



1 First, heat both the tacking iron and dry-mounting press. Then, turn the photograph face down and place a piece of dry-mounting tissue over the back. Use a tissue a little larger than the photo, and press just the tip of the hot iron near the four corners of the tissue, tacking it down.

2 Now, with a paper cutter, or a razor blade against a steel edge, trim about 1/16 inch off the photo, cutting through both photo and dry-mounting tissue. This insures a neat, exact edge. No dry-mounting tissue should extend over the edge of the photo or the tissue will stick to the dry-mounting press.



3 Turn the photo over and position it on your mounting board. Again tack on just the edges of all four corners. A small slip of paper is recommended under the iron to protect the surface of your photo.

4 Place the photo face up in the dry-mounting press with a protective tissue over the top of the photo. Apply heat and pressure for about 15 to 30 seconds, according to the weight of the paper and heat of the press. If bubbles occur, press them down with your tacking iron.

How to cut a mat

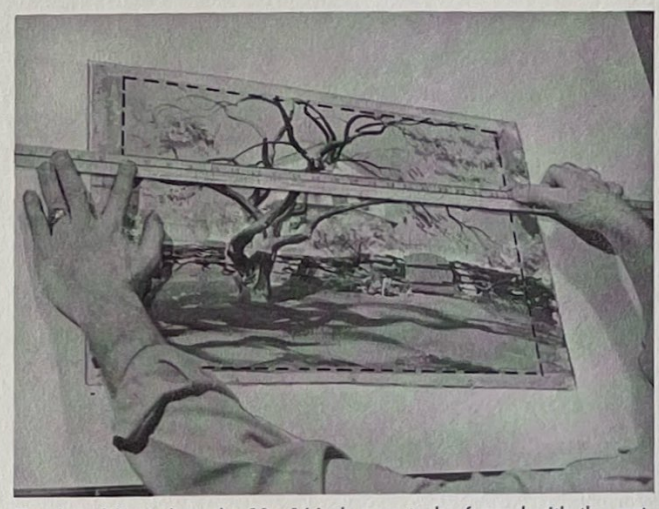
One of the first things a beginner in a studio may be asked to do is to cut a mat — a heavy paper frame for a piece of art work. Any good job looks better when matted, and most studios and agencies mat their work before presenting it to a client. Therefore, it is very important for you to learn — and learn accurately — how to cut a mat.

You need a metal straightedge, a long ruler or yardstick, a mat knife, a mat board, scrap board to cut on, masking and gummed tape, and a strong steady arm.

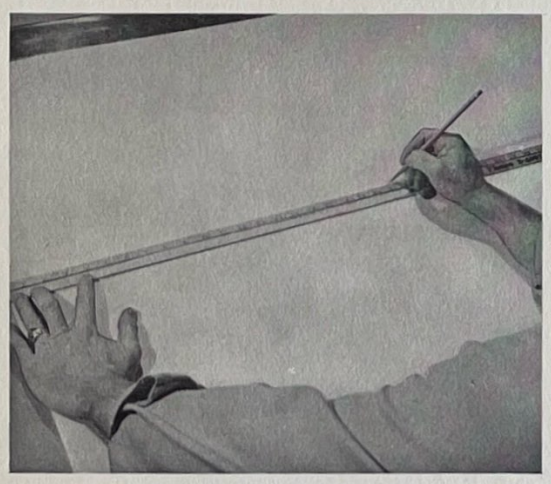
The type of mat board most used is generally white on one side and gray on the other. Either side may be used, depending upon the tone or value of the art work to be matted. Generally you cut a mat to the same width at the top and sides and slightly deeper at the bottom. When we refer to a 3 x 4 mat we mean it is three inches wide at the top and on each side, and four inches deep at the bottom.

It takes experience before you can cut a professional-looking mat. Practice cutting small mats from waste pieces of mat board. There are mechanical devices that make mat cutting easier, but you will be able to do the job better if you first understand how to cut a mat with a straightedge and mat knife.

For the purposes of our demonstration, we are going to mat a water color, using the white side of the mat board. The area which will show when the picture is matted is 20 x 16 inches.

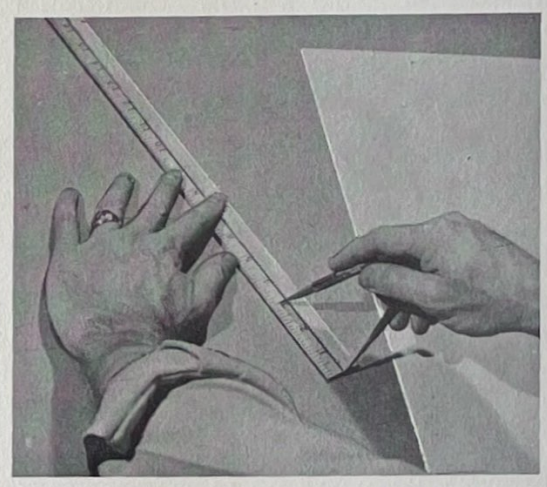


1 The dotted lines show the 20 x 16-inch area to be framed with the mat. To the 20 horizontal inches you add 6 inches for the two sides, and to the 16 vertical inches you add 7 inches for the top and bottom. The over-all dimensions of your mat are now 26 inches wide by 23 inches high.

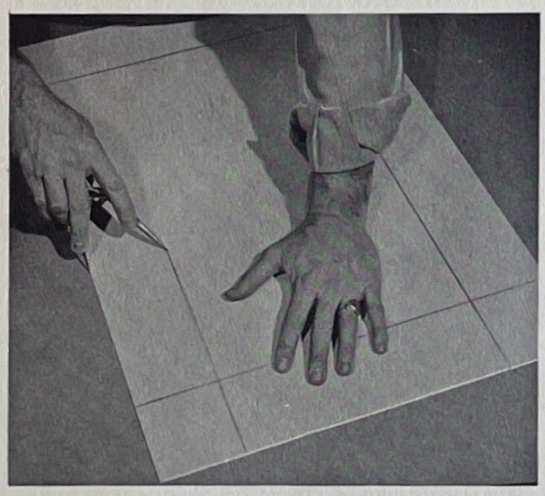


2 Place a large sheet of mat board face down on a clean piece of scrap board. Then measure the outside size, 26 x 23 inches, from the edges of the large sheet and place pencil marks for each dimension. All your measuring is done on the back of the mat to keep the front clean.

3 Place your straightedge against the two pencil marks on the 26-inch side. Now hold the mat knife against the straightedge and cut the board. Then repeat this process for the 23-inch side. This gives you a piece the required over-all size for your mat.

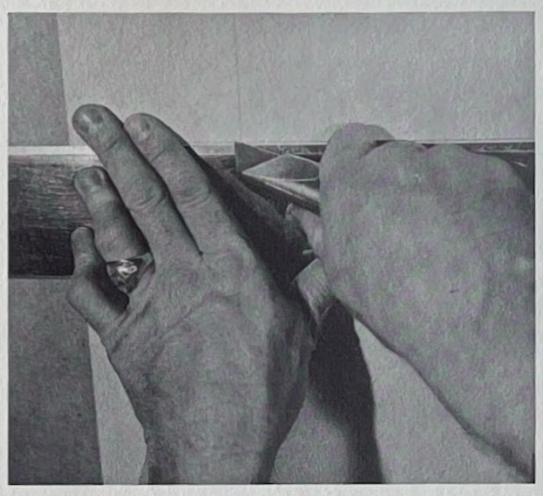


4 A simple dime-store compass helps here. Open it and set it at three inches. If you don't have a compass, simply measure three inches in from the top and sides and draw a line with the help of your straightedge.



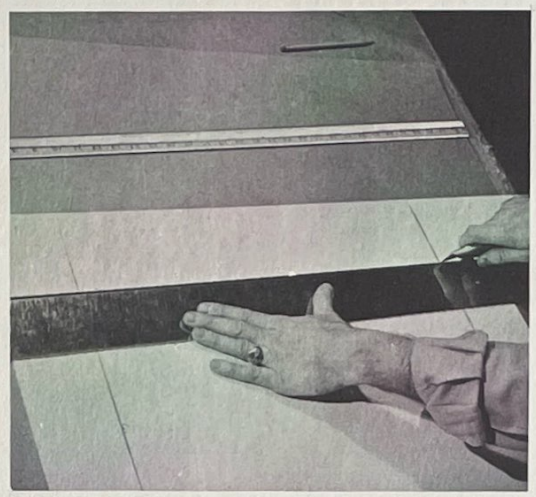
5 With the mat still face down, hold the metal point of the compass against the edge of the mat and draw a line along the top and two sides. Then reset the compass to four inches and draw the bottom line. Extend all lines to the edge.

6 The extended lines enable you to check the size of the mat against the water color before you do any cutting. It is better to measure twice and cut once. Nothing is more maddening than a mat nicely cut . . . to the wrong size.



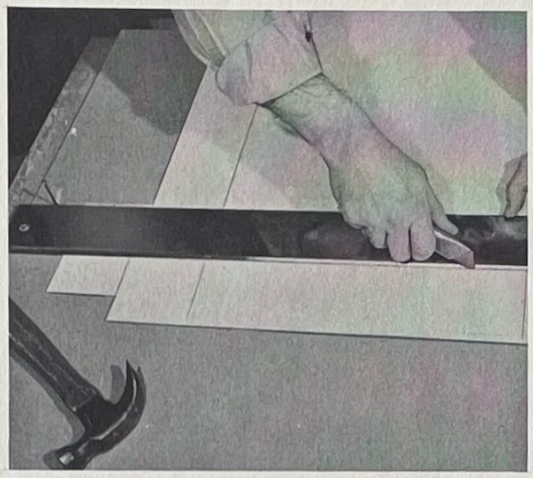
7 With the straightedge held firmly along the pencil line, push the point of the knife at an angle into the mat board about one-eighth inch beyond the starting line. This is necessary to make clean, sharp corners.

8 Hold the knife at an angle to cut a beveled edge. At the start you may find it easier to make a square cut. To do this, hold the knife at right angles to the paper, as indicated by the broken black line.

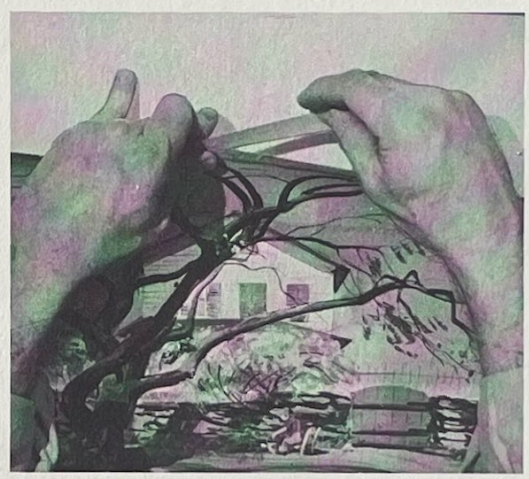


9 Cut through the board in one firm stroke, and go one-eighth inch beyond the corners. The extra piece of board under the mat enables your knife to cut through cleanly. Keep your mat knife sharp to avoid ragged edges and be careful it doesn't slip — your fingers are valuable.

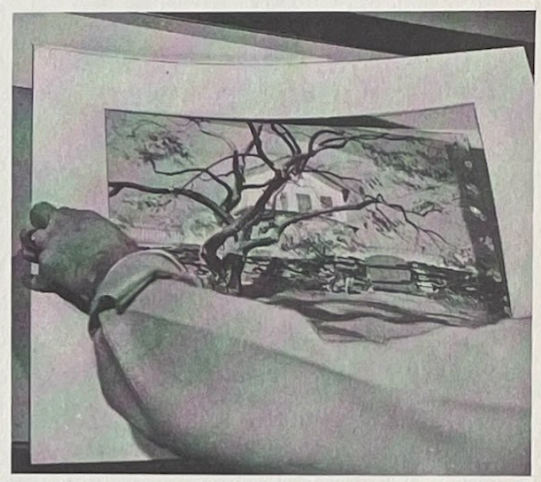
10 Like many other artists, you may find it easier to draw the knife across the board rather than toward yourself as in Picture 3. The arm swings easily for long cuts and the knife hand slides along the straightedge, keeping it from slipping.



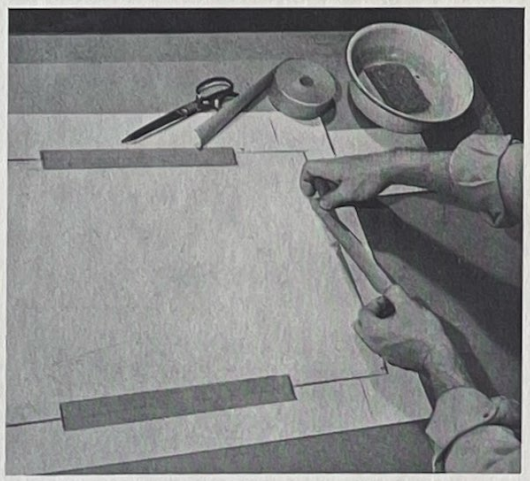
11 When you have cut the four beveled edges, the center of the mat drops out. To keep your straightedge from slipping, you may find it helpful to rest one end against a nail (or push pin). Smooth any rough edges with fine sandpaper.



12 Now, attach a five- or six-inch piece of masking tape (about one inch wide) under the top edge of the water color. The tape is placed in the center and half of it extends above the paper — sticky side up.

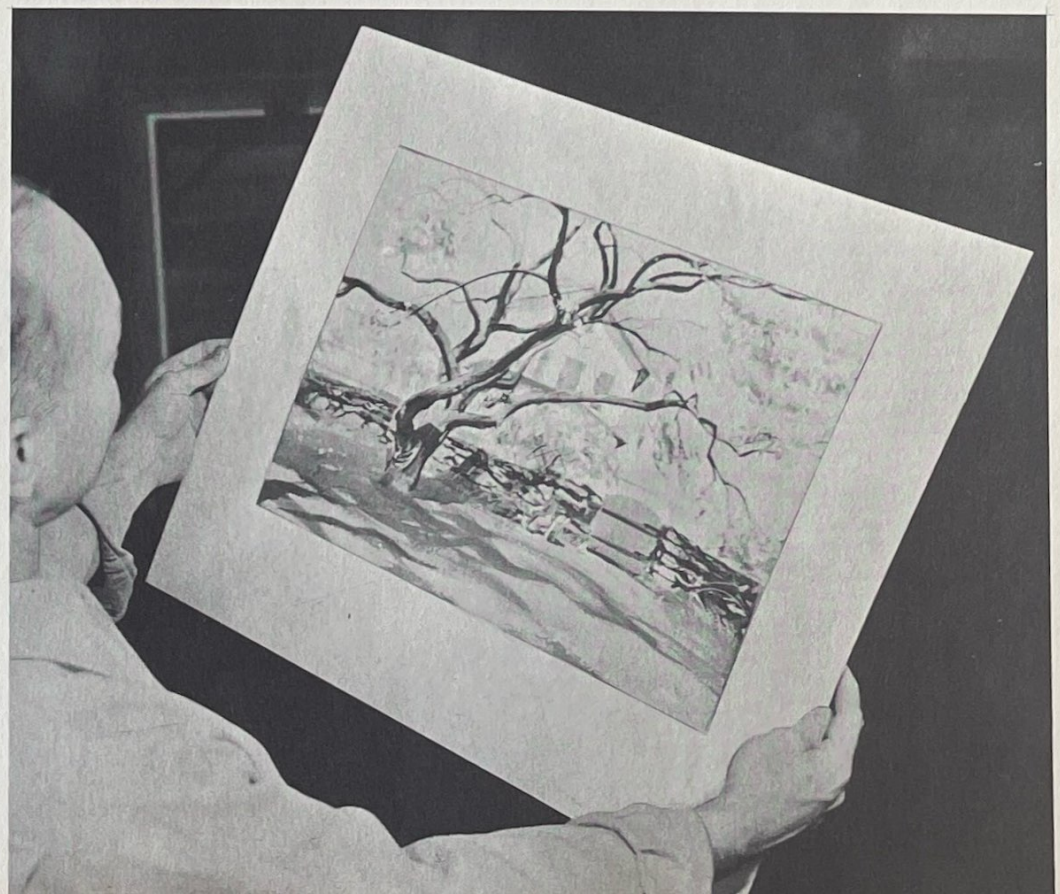


13 Next, place the mat over the picture. When it is in exactly the right position, press it against the protruding strip of tape. This holds the picture in position while you turn over both mat and picture.



14 To fasten the painting to the mat, cut pieces of gummed paper tape about half the length of the sides. Moisten each piece with a damp sponge and attach it. After doing three sides, remove the piece of masking tape from the top and replace it with gummed tape.

15 The finished job . . . any good picture looks better when matted. Another method of matting a picture is to mount it on a piece of mat board, leaving three inches at the top and sides and four inches at the bottom. Then dry-mount the mat over both the picture and the mat board. When a picture is painted on illustration board with enough space around it, simply dry-mount the mat on top.

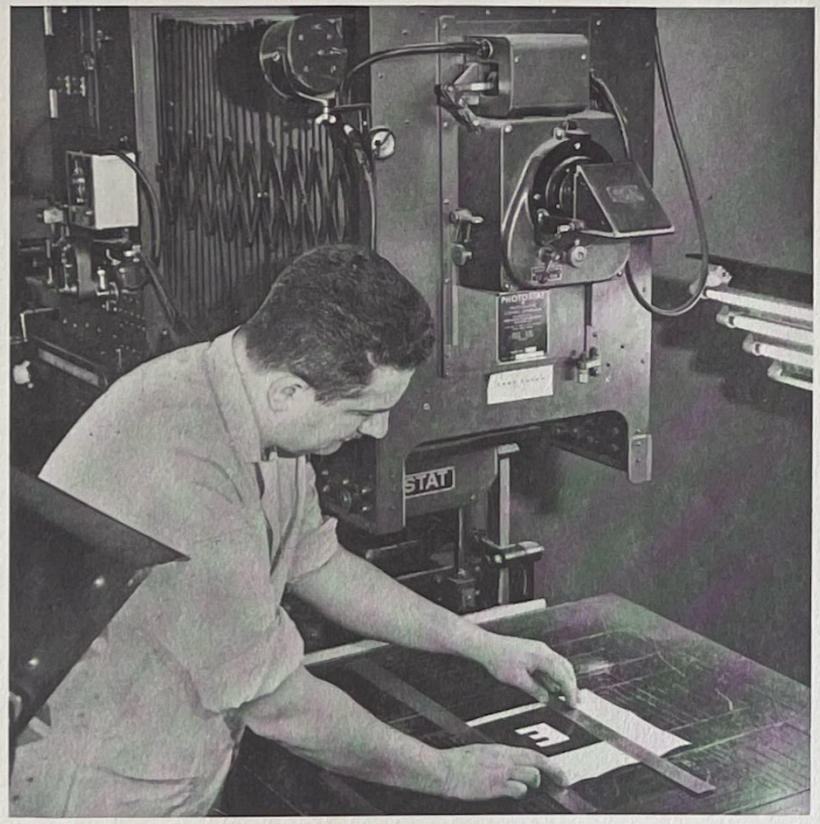


Photostats

A photostat service offers a quick and inexpensive way to have art work copied, enlarged, or reduced. The photostat machine (*right*) is essentially a large camera. Your art work is placed on the copy board and an "exposure" is made onto sensitized paper — this is a negative which is then developed. Next, the negative is photostated to make a positive. If there are paste-up lines or other marks on the art, you can remove them from the negative with black ink or opaque white before having the positive made.

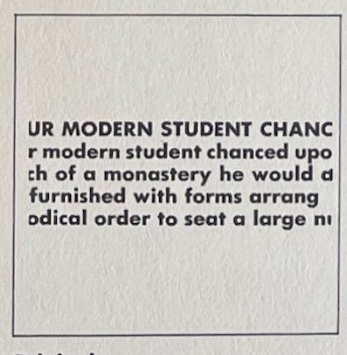
When ordering a "stat," write instructions clearly below the art or on a tissue taped over it. Indicate the size, whether you want a negative or positive or both, and whether they should have a matte or glossy finish. Glossies are sharper and are usually ordered for work to be reproduced, like type or hand lettering.

Don't rely on the accuracy of a stat. Photostat paper is not dimensionally stable — it is likely to change the proportions of your drawing. The degree of distortion, however, is slight and it seldom matters unless you are working on an exacting job.



Original **Negative** **Positive** **Enlarged** **Reduced** **Flopped**

From original art you can get a negative and a positive photostat. You can enlarge or reduce or flop — that is, turn a piece of art work from right to left, as shown at the far right.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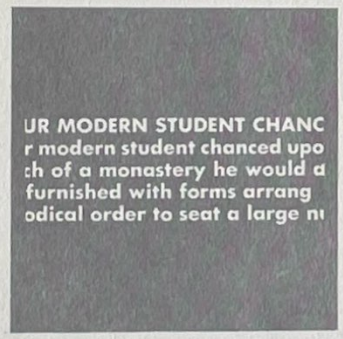
Original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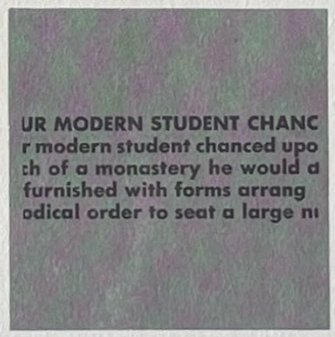
White on gray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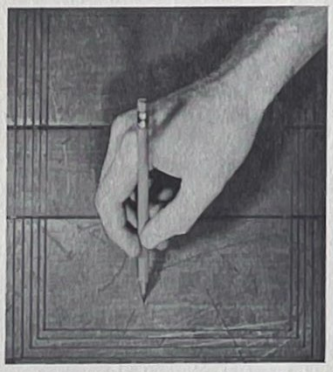
Black on gray

From the original art work shown at the left above, you can get a white-on-gray or a black-on-gray copy. These are often very helpful for use in a layout.

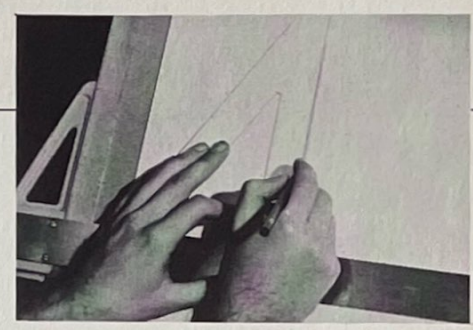
To make stats of three-dimensional objects, simply place the object on the copy board in the position you want. While not usually good enough to reproduce, the stat is excellent to draw from — and is especially helpful for showing type in perspective, as shown at the right.



The stat machine is useful for making a quick reference picture of the human hand. At the left you see a hand placed on the copy board, and at the right is the stat copy made of it.

You may need a record of your work before sending it to a client. To save money, "gang up" the various pieces *(left)* and order one reduced negative showing all of them. If necessary, you can later make a positive *(right)*.

CAUTION: Never rely on a photostat for accuracy.

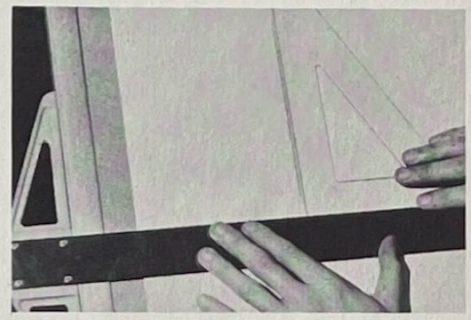


A simple way to test the accuracy of your triangle — place it firmly against your T-square and draw a sharp vertical line against the edge as shown.

Rescaling

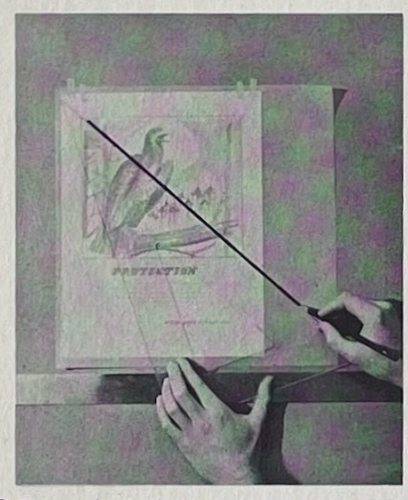
There may be times when you want to change the scale or size of a piece of art work or a layout — to make it larger or smaller without the aid of a photostat. Doing this job well means doing it accurately and neatly. The tools you use are your T-square and triangle. Plastic triangles have a peculiar way of losing their accuracy when least expected, so it is a good idea to check them occasionally.

When rescaling, use a pencil which is soft enough to avoid making a depression in the surface of the paper but hard enough to avoid smudging — an H pencil is about right. The illustrations below demonstrate how to scale art work up to a larger proportion. To scale it down, simply reverse the procedure shown. Our illustrations also show you how to enlarge and relocate any part of the art in its correct position and proportion in the rescaled size.

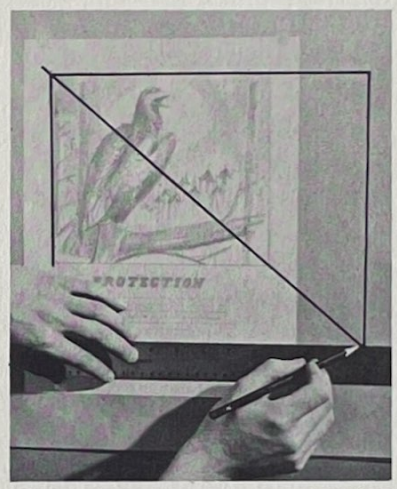


Without moving the T-square, flop the triangle to the opposite side of your line. If the line is parallel to the edge of the triangle, your triangle is accurate. If not, buy a new one.

1 Here we will demonstrate how to scale up (enlarge) a piece of art work — in this case the illustration part of a layout. Begin by lining up the layout with your T-square and then tape it to your drawing board.

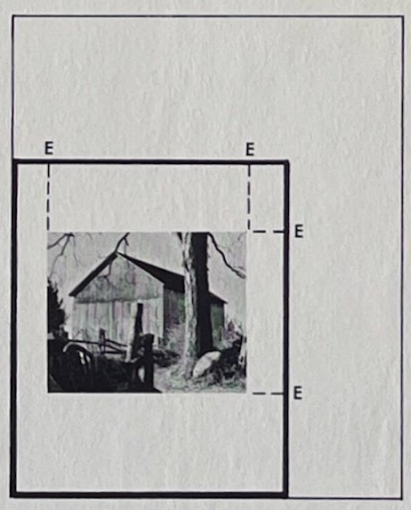


2 Tape a large sheet of tracing paper over the layout, placing it so the illustration appears in the upper left-hand corner of the large sheet. Draw a diagonal line from the upper left corner of the illustration through the lower right corner, and extend it a few inches — like the black line above.

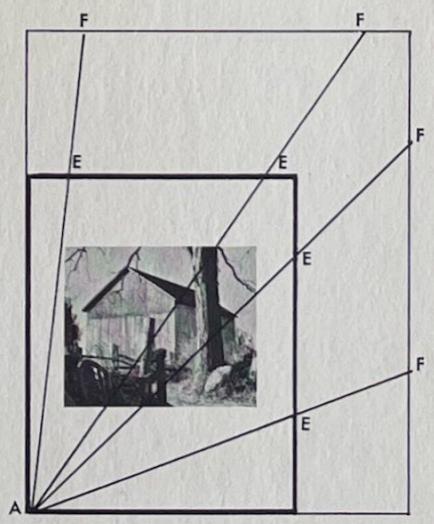


3 A horizontal and vertical line meeting at any point on the diagonal will give you a correctly proportioned size for your picture. For a 1½-times enlargement, extend the top line half the illustration width. From the end of this line, draw a vertical line to intersect the diagonal. Complete the outline.

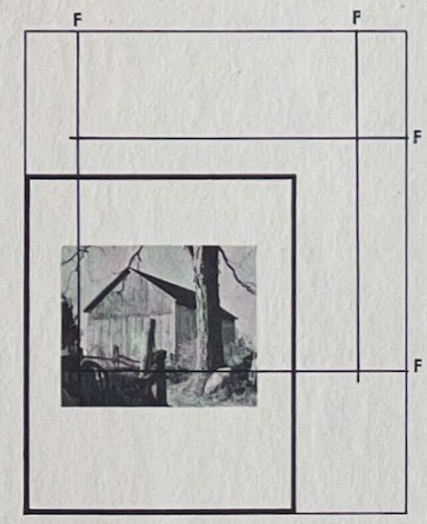
Note: If you want to enlarge or reduce a drawing of irregular shape, first rule a box around it, touching all four sides. Then scale it up or down as required.



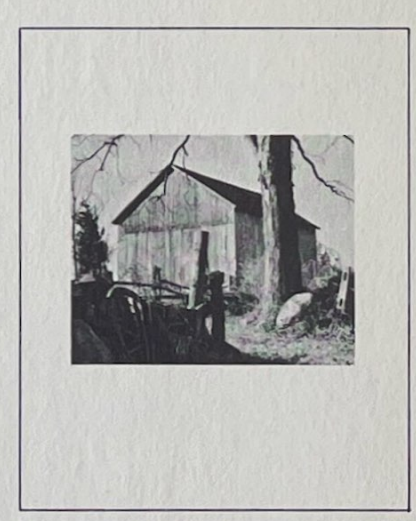
1 Here we demonstrate how to relocate the photograph in the enlarged rectangle. First extend the vertical and horizontal lines of this panel until they touch the original rectangle at points E.



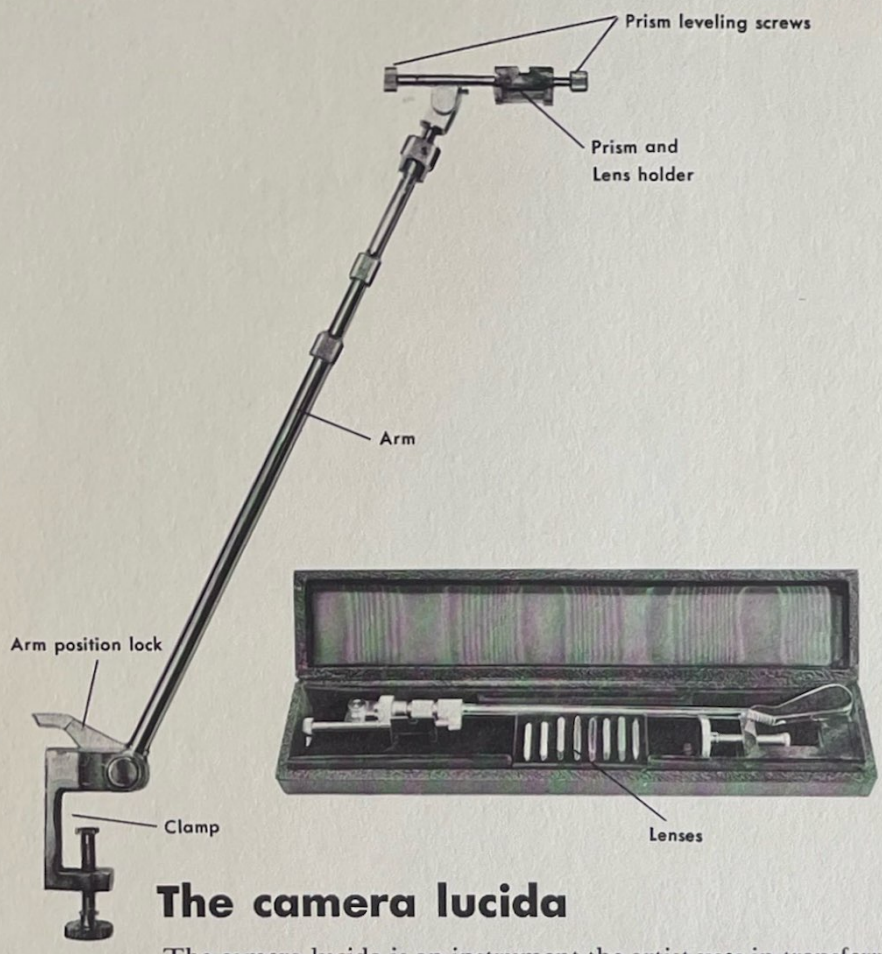
2 From A, draw light lines through points E on the original rectangle and extend them until they intersect the large rectangle at points F.



3 From the four points F draw vertical and horizontal lines until they cross to form the new location for the photo.



4 This shows the enlarged proportions of the original photo in its correct position on the rescaled size.



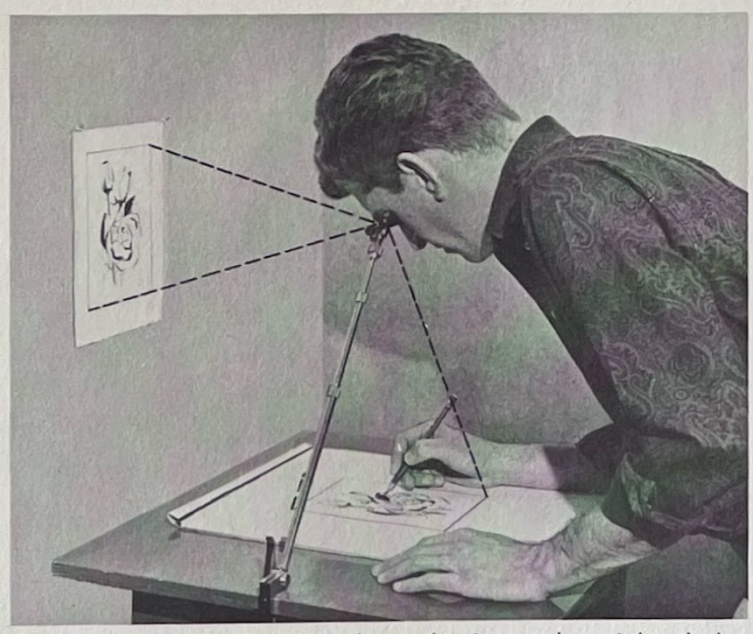
The camera lucida

The camera lucida is an instrument the artist uses in transferring onto his drawing surface an image of whatever is placed before it — drawings, photographs, lettering, tear sheets, or even three-dimensional objects. It is used to enlarge or reduce, or duplicate the subject. The camera lucida or "lucy" generally comes in a box as shown above, with a set of lenses which sharpen the image. A lens chart is also supplied and so are directions on how to work with the lucy.

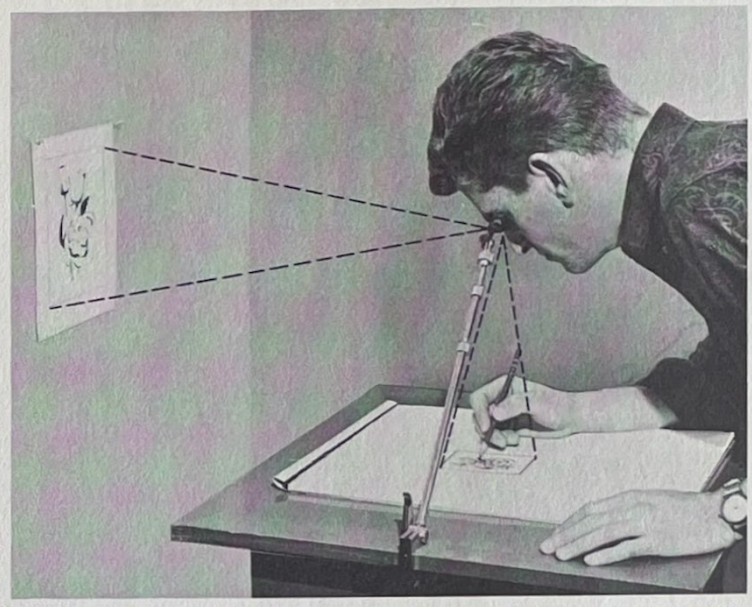
To use the lucy, you need a horizontal-topped table about thirty-two inches high and large enough to hold a layout pad or illustration board. Clamp the lucy to the edge of your table and tack on the wall directly in front of the lucy the picture to be copied; then place your layout pad on this table. The exact distance from the picture to the lucy prism, and the distance from the prism to your layout pad, will determine the degree of enlargement or reduction. Changes in size are made by moving the table, to which the lucy is clamped, forward or back, and raising or lowering the lucy arm. When the desired size is reached, you consult your lens chart and place the correct lens in the holder (in front of the prism). This will sharpen the image and correct any distortion.

You look directly down into the lucy prism with one eye, and you see an image of the picture on your drawing surface. With the other eye you focus on the point of the pencil in your hand and guide the point over the image. With a little practice, both the image and the pencil point can be seen together. The object can then be outlined, shaded, or detailed.

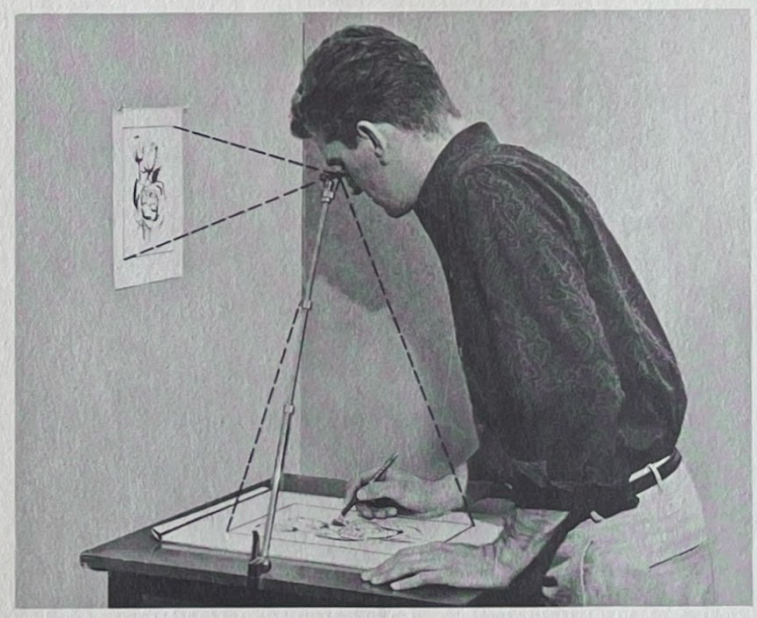
Another use of the lucy is in flopping a drawing — that is, turning it from left to right. To do this, tack your picture upside down in front of the lucy. Then simply turn the prism bar forward and insert the correct lens, after taking your reading from the lens chart. Your picture will appear reversed from left to right on your drawing surface.



Same size: If we place the lucy as close to the picture to be copied as the lucy is to the drawing surface, the image will be the same size as the original.



Reducing: To reduce a picture by one-half, move the lucy twice as far from the subject as the lucy is from the drawing surface. Consult your lens chart for the correct lens to use at this distance.



Enlarging: To enlarge a picture to twice the size of the original, place the lucy half as far from the subject as the lucy is from the drawing surface. Consult your lens chart for the correct lens to use.

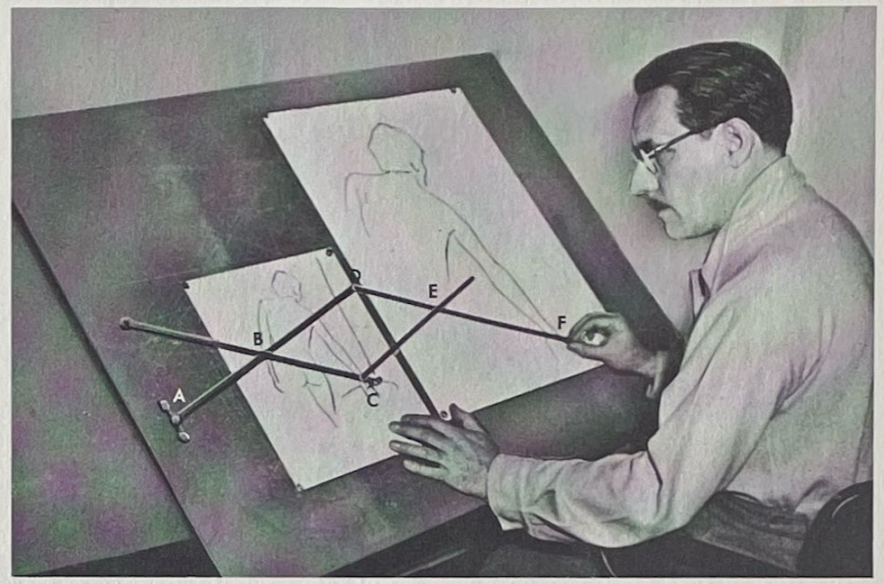
The opaque projector

The opaque projector operates on the principle of the magic lantern, projecting a photograph or other copy to a vertical drawing surface. The artist simply draws over the projected image. The degree of enlargement is determined by the distance from projector to drawing surface: the greater the distance, the larger the image. With certain projectors, to reduce copy you may need to devise some means of holding the lens the necessary distance from the projector.

In the photo at the right, Faculty member Norman Rockwell demonstrates the use of an opaque projector, in this case a Balopticon. The Balopticon will enlarge a sketch or photograph which is not larger than 6 by 6⅜ inches. However, sketches or photographs of much larger size can be placed in the machine and 6 by 6⅜-inch sections enlarged.

The pantograph

Here Al Parker is shown using the pantograph to enlarge a drawing. The pantograph can also be used to reduce. It is made of four arms of wood or metal joined together at four points — B, C, D, E. Point A is screwed to your drawing table. Point C traces over the picture to be copied. Point F is a pencil point which exactly repeats the motions of Point C and copies the picture onto your drawing paper, but in either an enlarged or reduced proportion. To change the degree of enlargement or reduction, the connecting points B and E are shifted along a scale which is clearly marked on the arms. You watch Point C following the lines of the original art as your hand guides the pencil at point F to make the enlarged or reduced drawing.



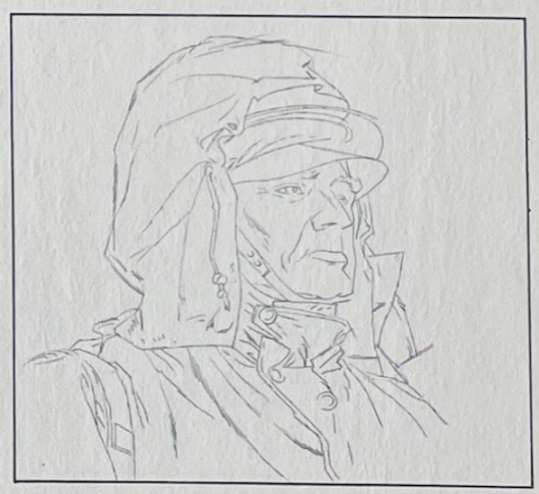
Making and using a transfer sheet

A transfer sheet is like a sheet of carbon paper except that you make it yourself. All you have to do is cover one side of a sheet of tracing paper with graphite. The sheet is very handy for transferring drawings on tracing or visualizing paper to a piece of illustration board, on which you make your finished rendering. After tracing down a drawing, you can easily erase the graphite lines. The sheet can be stored and used over and over again. If you prefer, you can purchase transfer sheets already treated with graphite.

1 Blacken one side of a sheet of tracing paper with a 4B or 6B pencil. Next, moisten a piece of Kleenex with rubber-cement thinner and rub over this blackened area. This forms an even, smooth graphite surface.

2 Tape your drawing in position on the illustration board. Then slip the transfer sheet, graphite side down, under the tracing. Using a 4H or 5H pencil, trace the outlines of the drawing. The pressure transfers a clean graphite line from the transfer sheet to the illustration board.

3 After tracing a few lines, it is always wise to check. Lift both sheets to see if the drawing is coming through correctly. Too much pressure will leave an indentation in the illustration board, which is undesirable. Too little pressure will not give you a clean graphite line.



4 Here the drawing has been completely traced on the illustration board. When you have finished rendering your illustration, any graphite lines that are left can quickly be removed with a kneaded eraser.

Photographs

Countless thousands of photographs are used every day in advertising and publishing. They are seldom sent out for reproduction without some work by the artist.

Always handle photos with care. The surface is extremely delicate — just the slightest pressure of a pencil point can leave a mark which may show when the picture is reproduced. Before any work is done, a photograph is usually dry-mounted onto mounting board with rubber cement or the dry-mounting press. If the photo is badly buckled, it can be soaked in water and mounted with library paste while still wet and put between blotters, under weight, until dry. When this method is used, a piece of plain paper is mounted at the same time on the back of the mounting board to prevent warping.

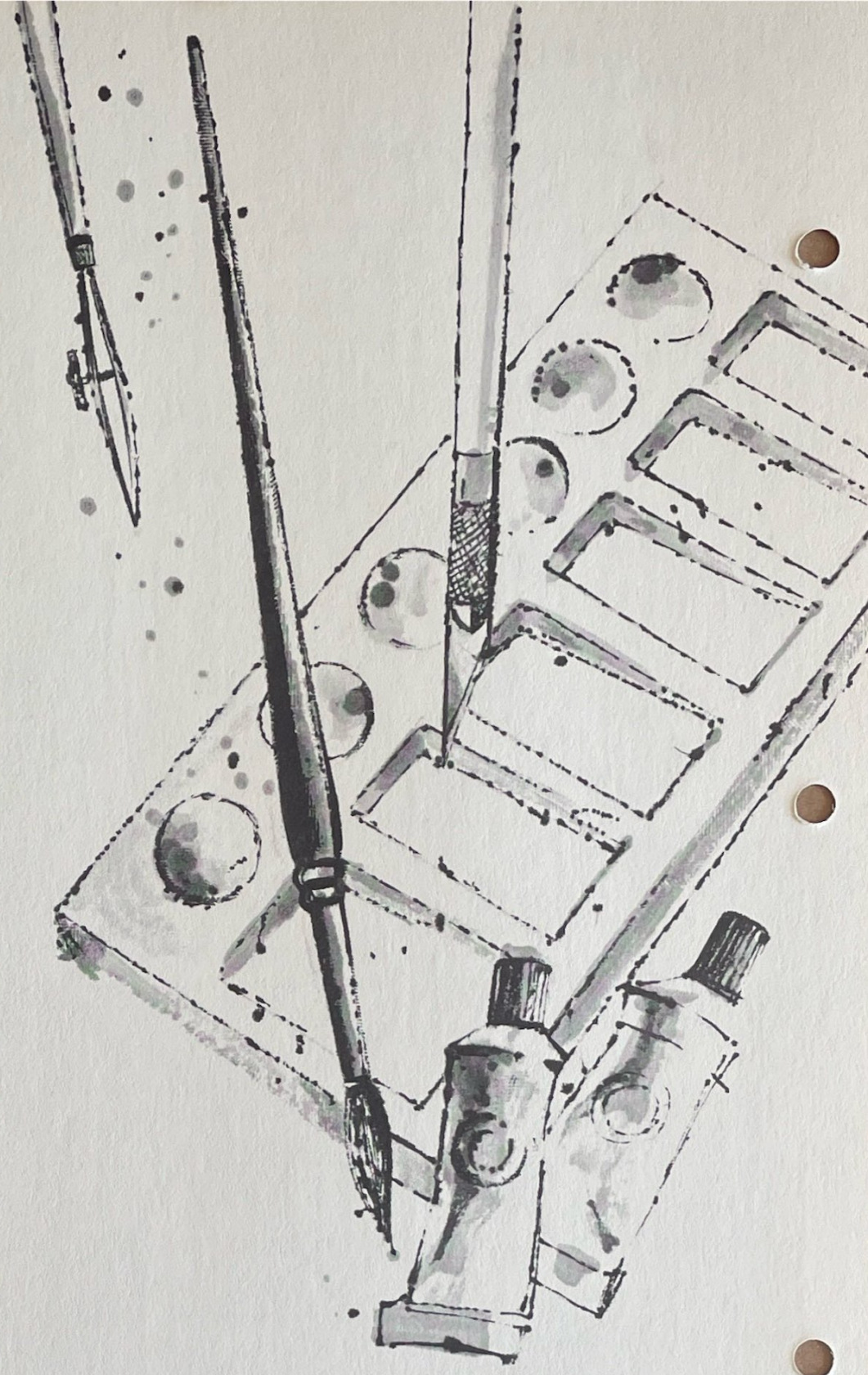
Many photographs must be retouched to bring out their important features or eliminate undesirable ones. Since the surface of a glossy photograph is likely to have a light film of oil which is resistant to water color, this film must be removed before retouching. Some artists rub the surface with fuller's earth (a fine white powder), while others just rub it with saliva on a piece of cotton, which has the same effect. You can also add a liquid called Noncrawl to your pigments. This has the property of cutting through the film of oil and allowing the paint to adhere.

If you compare several photographs you will find that they are not all alike in tonal value. Some are warm and some are cool. Therefore, for best results you need two palettes for retouching — a warm one for warm-toned photos and a cool one for cool-toned photos. Warm and cool retouching grays may be purchased already mixed in tubes. However, if you care to prepare your own, the cool gray is made by mixing lampblack and opaque white. To make warm gray add a touch of yellow ochre.

A large part of the value of a photograph is its believability. When retouching is apparent, the photo has a "fixed-up" look and its believability is weakened. Do not over-retouch!

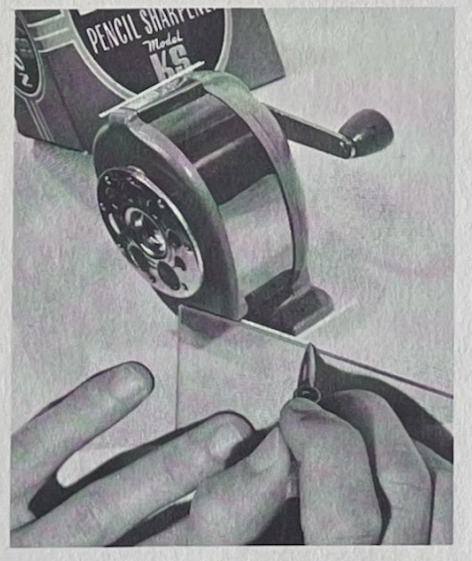
If you use white in retouching, as in highlighting or silhouetting, make sure the white is pure and does not contain any warm or yellow tones — it will reproduce as a light gray and your photograph will lack sparkle.

On this and the following pages we demonstrate some of the most common procedures in working with photographs in the studio. We start below by showing you how to silhouette an object in a photograph. This is done when you want the object to be reproduced without its background.



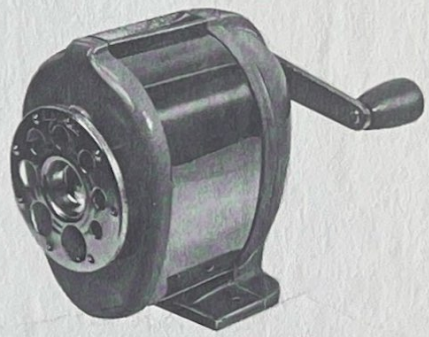
Silhouetting

1 Mount the glossy photo on a piece of mounting board and, using cotton, gently rub the surface of the photo with fuller's earth and blow away the residue. It is not necessary to do this on a matte-finish print.



2 First, the straight lines of the pencil sharpener are put in with opaque white in the ruling pen. The opaque white should touch or even very slightly overlap the object being silhouetted. Retouch very light edges so they will show against the white.

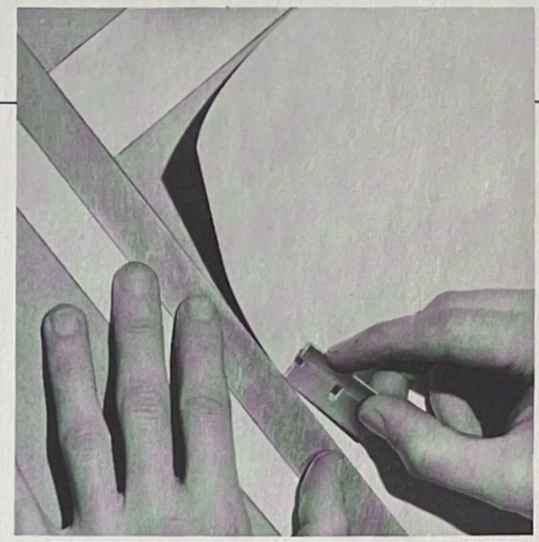
3 Now the brush is used with opaque white on the curved edges. Next, paint around the edges of the ruled lines, making them a little wider. It is not necessary to white out all the rest of the photo — a line about 1/4 inch wide around the object is sufficient. Then mark the finished silhouetted photo for size, tape a protective flap of paper over it and it is ready for reproduction. When printed, it will appear as shown at right — completely removed from its original background.



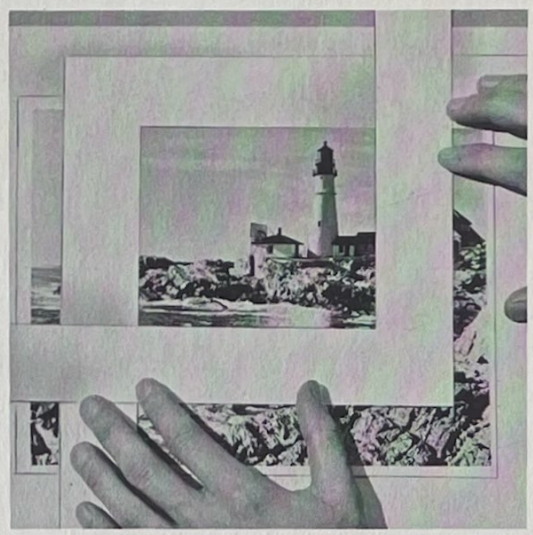
Cropping

Crop marks are your directions to the man who will make the printing plates of the photo, telling him how much or how little of it he is to use. By carefully cropping away uninteresting and meaningless details, you can show the picture to best advantage. A good way to plan your cropping is to place a frame of cut pieces of paper around your photo and move them about until you arrive at a good composition. It is always best to use crop marks, but do not crop a photograph at the very edge. This is because photographs are rarely perfectly square and the platemaker will have to trim off a little to square up the picture.

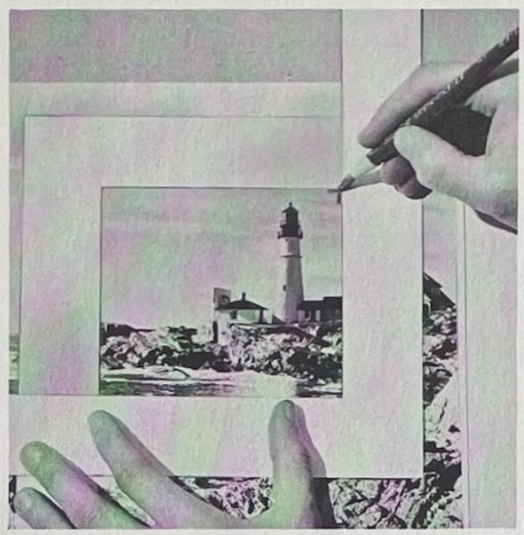
On this page we show you how to crop a photograph, as well as some of the most common errors and how to avoid them.



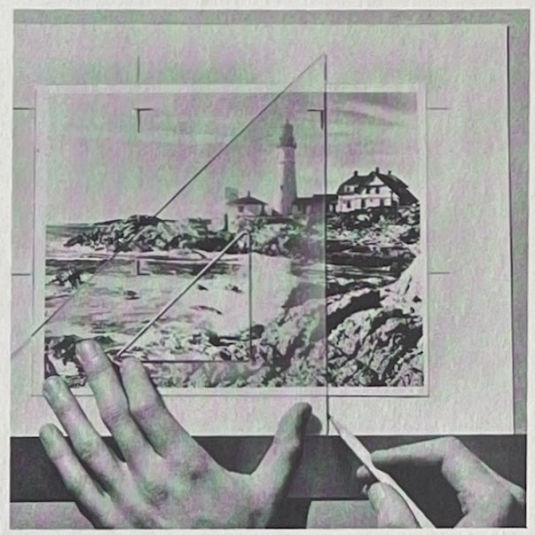
1 From a piece of heavy white bond, cut two right angles with sides a little longer than the longest dimension of your photograph. These can both be cut at the same time. Use your T-square and triangle to assure true right angles.



2 Place both of the right angles over the mounted photograph as shown. The angles can be moved around until the desired composition and proportion are reached.

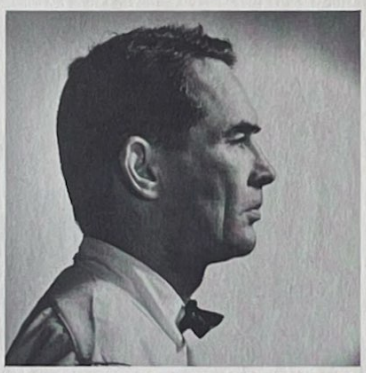


3 Hold the angles in place and mark the corners of your composition with grease pencil. This can be removed easily by rubbing with Kleenex. If the marks are stubborn, moisten the tissue with rubber-cement thinner.

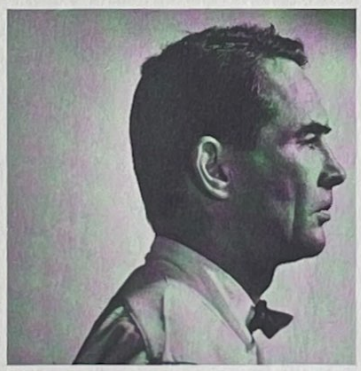


4 Remove the right angles and, using your T-square and triangle and a sharp black pencil, place crop marks on the mounting board around your photograph, following the corner marks made earlier with your grease pencil.

Do's and don'ts



Do leave room in front of a head in a portrait.



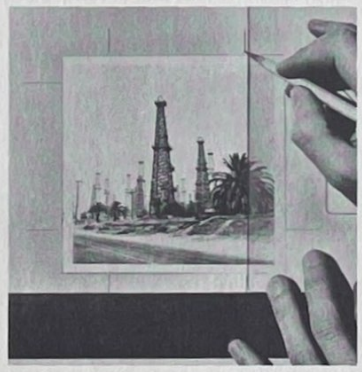
Don't crop too close in front — leave room for the portrait to "breathe."

Do crop sharp angles that just touch the edges of a photograph.

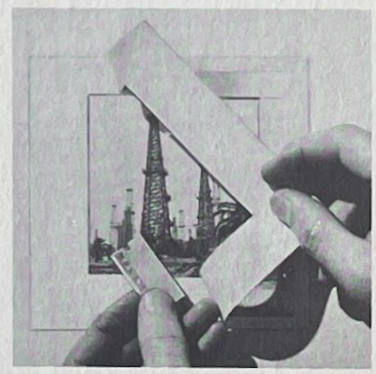
Don't crop so that sharp angles touch the borders and lead the eye out.

Do use your cropping to focus on the essential elements in your photo.

Don't leave irrelevant or distracting details in the picture.



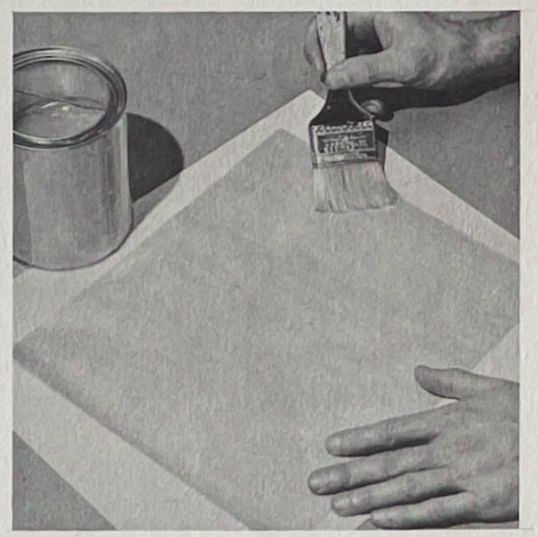
Do put in crop marks on the mounting board around your photograph.



Don't crop a photograph by cutting it with a razor blade.

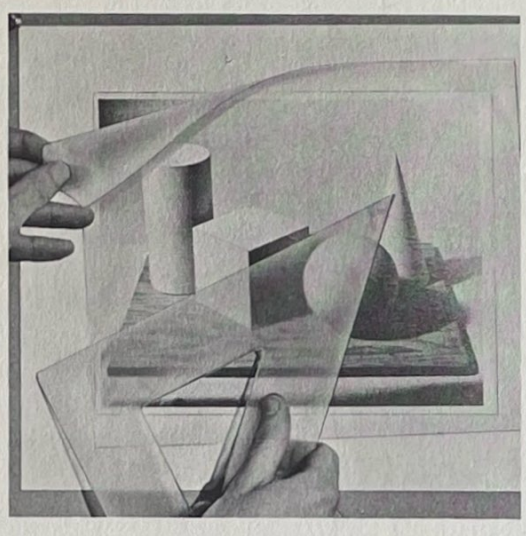
Friskets

A frisket is a semi-transparent covering which you place over part of a drawing or a photograph to protect that part while you work on the rest. It is used principally to shield art when you retouch it with the airbrush, but it has other uses as well. Frisket paper can be purchased from most art stores and comes in two forms — plain and prepared (adhesive back). Here we demonstrate the use of both forms, as well as other ways to protect art work.

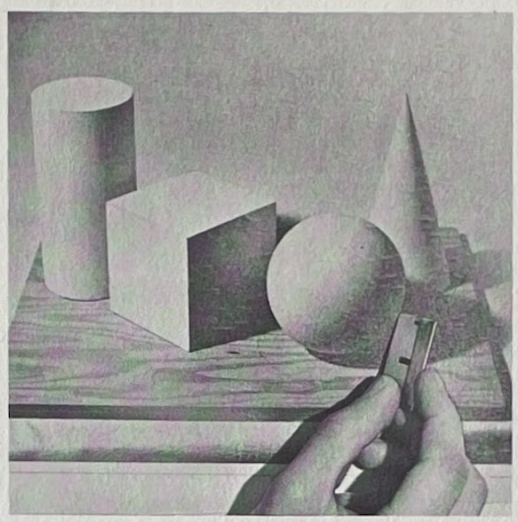


1 To prepare plain frisket paper, cut a sheet large enough to cover your photograph and coat one side of the paper evenly with thin rubber cement. Let it dry thoroughly and then brush on a second coat gently — pressure may cause lumps. When thoroughly dry, the frisket is ready to use.

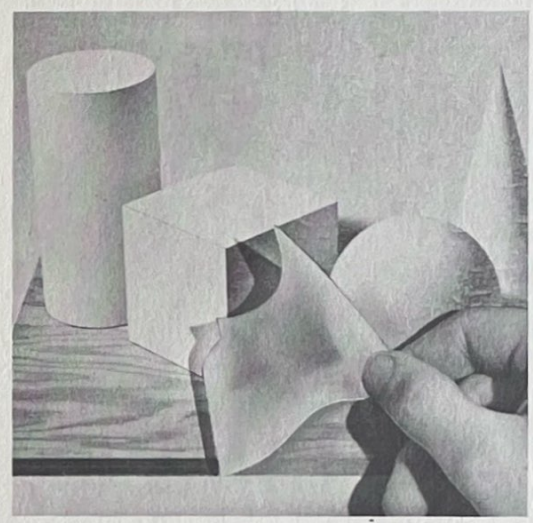
2 Prepared frisket paper has an adhesive already on it which is protected with a backing sheet similar to wax paper. When you are ready to frisket a photo or drawing, simply peel away the protective backing as shown and place the paper adhesive-side down on your work.



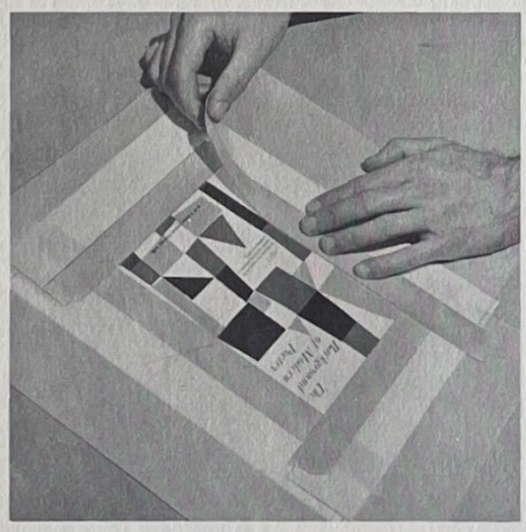
3 Whichever paper you use, the next step is to smooth the frisket paper down tightly with a triangle, working from the center toward the outside edges. It is important to have frisket paper lie absolutely flat — if air bubbles are left under it, paint from the air brush may seep underneath.



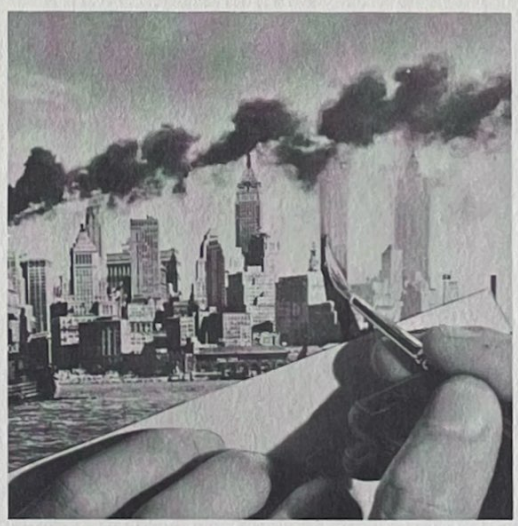
4 On this job you want to airbrush a darker tone on the busy wood-grain foreground so the forms will stand out clearly. Take a sharp razor blade or frisket knife and with gentle, even pressure cut around the part to be worked on. Cut only through the frisket paper — too much pressure will cut into the photograph.



5 With your blade, pick up one edge of the frisket paper and gently peel it away from the area you wish to expose. Before actually starting to work on the area, rub over all cut edges with your fingers to make sure the frisket is tight and there are no leaks.

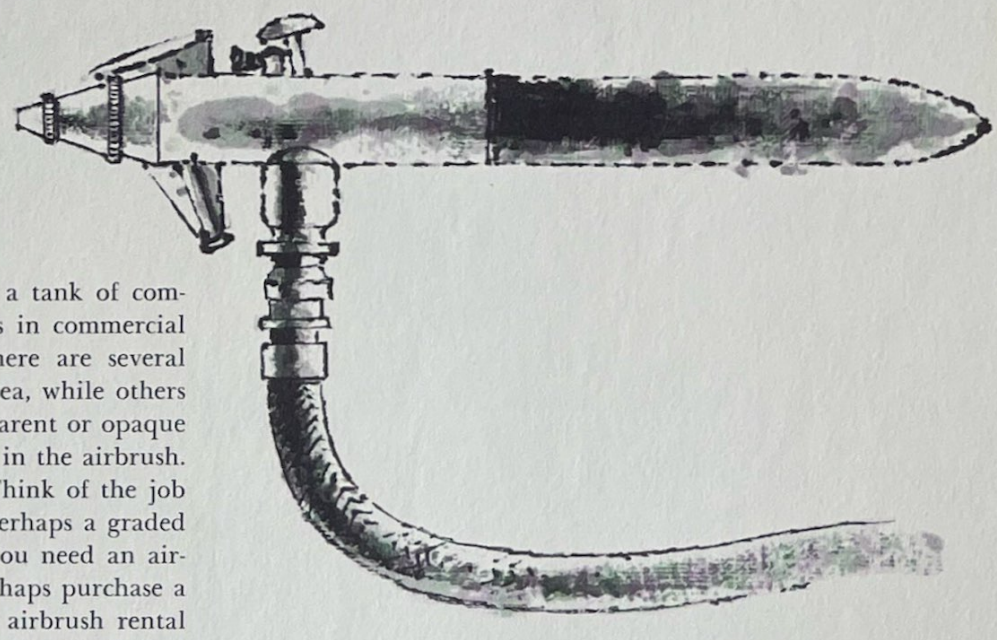


6 An alternative way to frisket an area with straight edges — in this case a photo of a book cover — is to cover the area with tracing paper and use masking tape to hold the paper and outline the subject.



7 Often the area to be protected will have such an irregular edge that cutting a frisket for it is difficult. Here you can use liquid frisket, which is water soluble and can be painted on with a brush as shown. It is ready to use when dry and afterward may be peeled off easily with the pick-up. In this case liquid frisket will cover the buildings so the background can be worked on.

8 When working near a highly retouched area, it is often necessary to avoid touching it. A bridge can quickly be made from two small blocks of wood taped to either end of a wooden ruler, and you can rest your hand on this as you work. Make the bridge long enough to span the area you wish to protect.

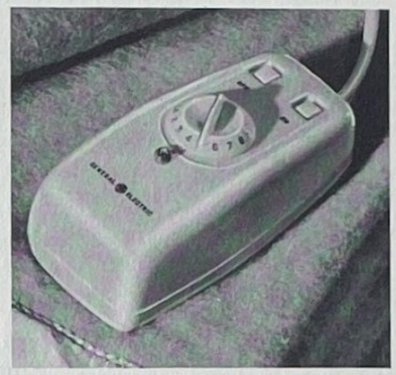


The airbrush

The airbrush is a small spray gun which is operated from a tank of compressed air or a small compressor. It has many applications in commercial art work and is commonly used in photo retouching. There are several different types and sizes of airbrushes. Some spray a large area, while others send out a fine jet for very delicate work. You can use transparent or opaque water color, dyes, colored inks or any water-soluble pigments in the airbrush.

Don't allow yourself to become a slave to the airbrush. Think of the job to be done, and consider which medium might work best. Perhaps a graded wash or even pencil would be better for your purpose. If you need an airbrush, look at the models available at your art store and perhaps purchase a book on airbrush technique. Many art stores also have an airbrush rental service. You might find it helpful to experiment with several types before choosing one to buy. Below we show you examples of how a photo is retouched with the airbrush for magazine and newspaper use, and drawings in which the airbrush has been used for certain specific effects.

Above is the original unretouched photograph which we are going to retouch for magazine and newspaper use.



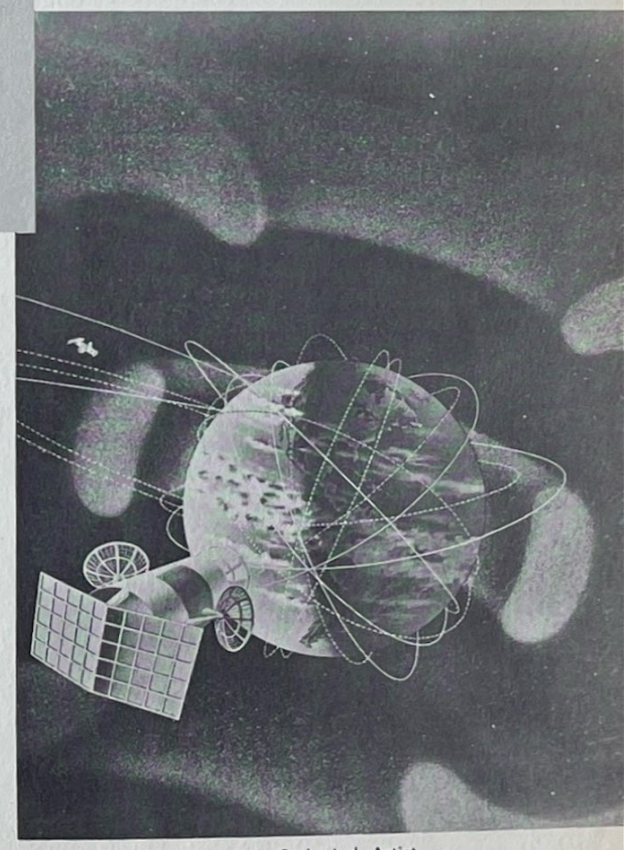
For magazine reproduction, the retouching is delicate and the tonal changes are more gradual. Notice that details have been carefully highlighted and sharpened. Edges which were not clear are now crisp and sharp so that the viewer can see the form of the product better.

Here the photograph has been retouched for newspaper reproduction. Because of the coarser quality of newspaper reproduction the retouching is simpler — it has more contrast and less detail. Basically, the photo contains a few simple tones — black, white, and two intermediate tones.

Other examples of airbrush work: On these illustrations the airbrush was used to create the frosted effect on the glass and bottle, the silverware pattern, the sky and smoke in the poster, and the metallic effect in the cutaway drawing. The illustration at the far right contains airbrush stippling, and this tool was used again to create the dark values in the shadow areas.

Courtesy The International Silver Co.

Courtesy Norma-Hoffman Bearings Corp.



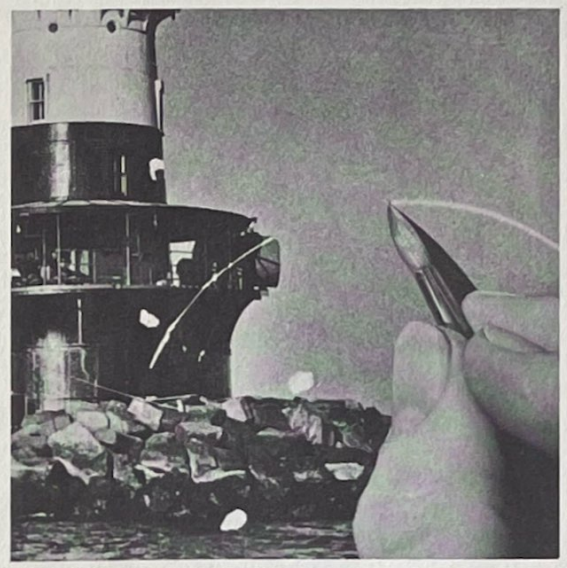
Courtesy of Fortune Magazine; Gschwind, Artist

Three common retouching problems

Removing spots

Many photographs that are to be reproduced have spots or scratches that must be opaqued or painted out. You do this with a water-color brush and opaque retouch grays. The photographic tones must be matched so perfectly that the retouching will not show.

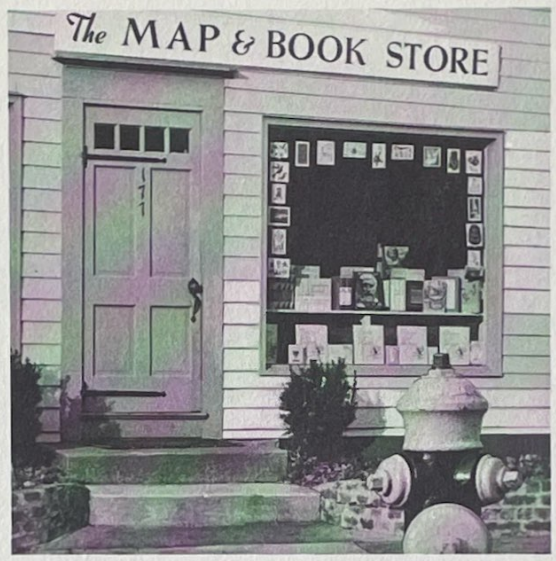
1 Here is a photo with an unusually large number of spots and scratches. It was chosen to dramatize the problems and show clearly how they can be solved. In actual practice you would rarely use a photo in this condition.



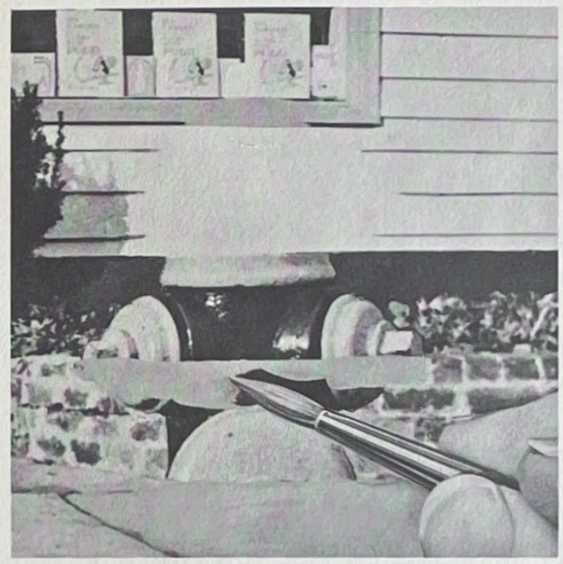
2 After wiping the surface of the photo with fuller's earth, carefully mix the tones of retouch gray and paint over the flaws in the light areas. Each value should be matched exactly or the retouching will show.

Removing an object

It is sometimes necessary to remove a complete object such as a sign post, fire hydrant, or a figure. You can do this with an airbrush when the background area is a simple, flat tone, but when detail and texture must be matched you will do better with a water-color brush. Retouch grays are used in either case.



1 This photo of a store front is marred by the presence of the fire hydrant. To paint it out, you must exactly match the values and textures of wood, brick, leaves, and pavement with opaque retouch grays.



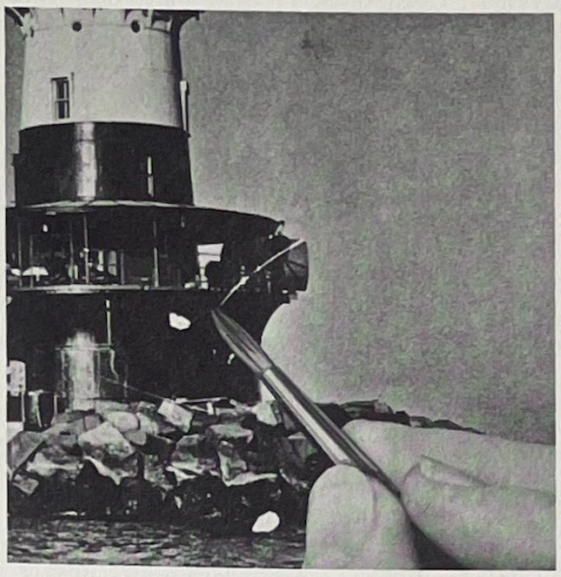
2 In this close-up of the problem section the top of the hydrant has been painted over in a light tone to match the clapboards. Next, you apply the middle tones, using as many different values as you need to match the various areas.

The problem background

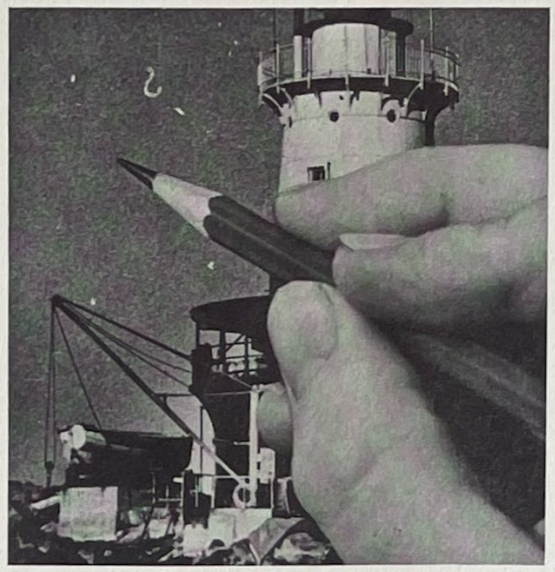
It is often important to "soften" a background if it detracts from the subject of a photo. Sometimes a confusing background object must be removed and the rest of the background toned down. In some cases it is desirable to replace the entire background with a gray tone which will emphasize the figure. Shown here are four possible approaches.

1 In this picture the tones of the figure and those of the background are too similar, and the leaves in back of the head cause confusion. The problem is to make the figure stand out sharply. The smaller the picture is to be reproduced, the simpler the background tones must be.

2 You can get rid of a problem background by substituting an over-all gray tone. A good way to do this is to silhouette the entire figure with opaque white and instruct the platemaker to fill in a gray tone over the entire background and up to the edges of the figure.

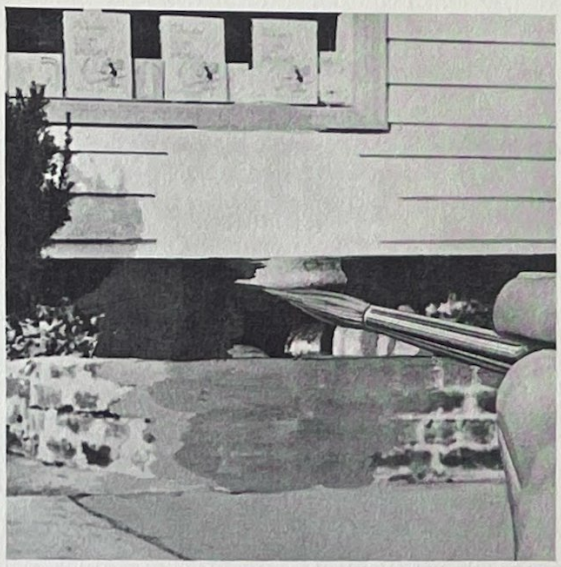


3 Now you apply the darker tones, using as many different values as needed to match the tones of the photo. Be sure not to get fingerprints on the picture — this will prevent the paint from adhering.

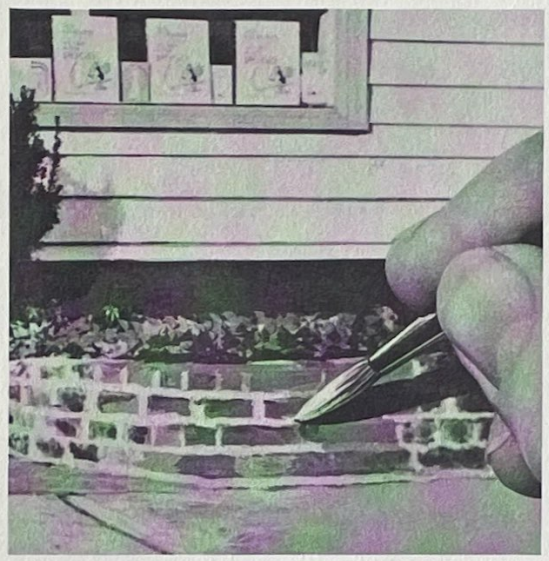


4 You can eliminate small spots quickly with a Stabilo or other pencil made for this purpose. Use a fine, circular motion to fill in the spot. Press lightly — don't dig into the surface. Match very dark spots with retouch grays.

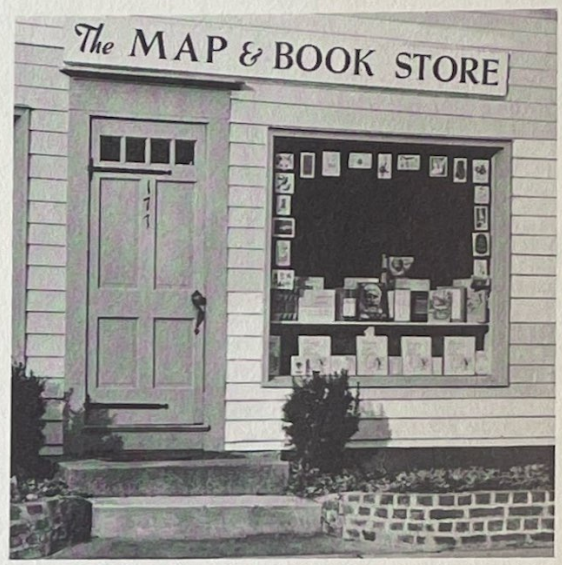
5 Here is the retouched photo with the blemishes removed. Always check the retouching thoroughly to see that the paint matches the photo tones. When a properly retouched photograph is reproduced, the brush work should be invisible.



3 The dark tones are now painted in. Don't work over any area too long or the brush will begin to pick up the paint. If you have difficulty matching a tone, allow the paint to dry before going back into it.



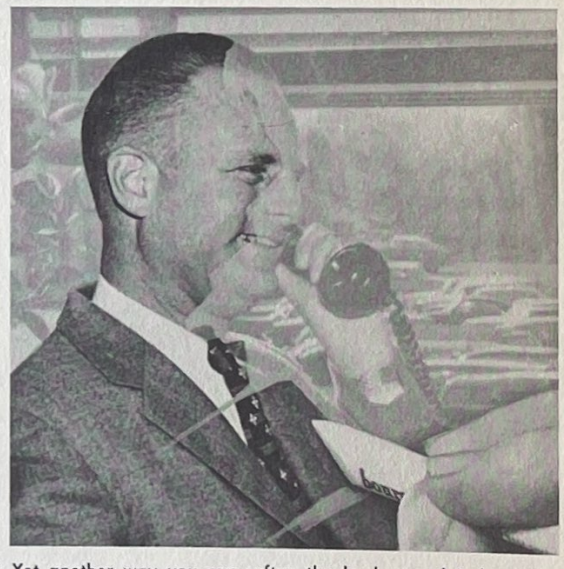
4 Details and textures must now be matched. You must be very careful or the retouched areas will be noticeable. Vary the paint application when necessary — some places may require stippling, some dry brush, etc.



5 Here is the finished picture minus the fire hydrant, with the area behind it completely restored. Compare the photo with the original and notice how carefully the values and textures have been matched.

3 The entire background can be softened with an even spray of airbrush — either light or dark to suit your requirements. In the above photo, a frisket was not used on the figure. Excess paint is wiped off with small wads of moist cotton, twisted onto the sharpened end of a brush handle.

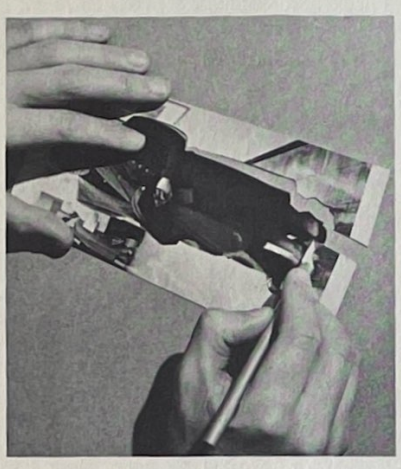
4 Here a frisket was used to protect the figure while the background was airbrushed. After the frisket is removed, the edges of the figure may seem sharp and unnatural, particularly around soft-textured areas such as hair. You can soften the outlines with a moistened brush and thin retouch grays.



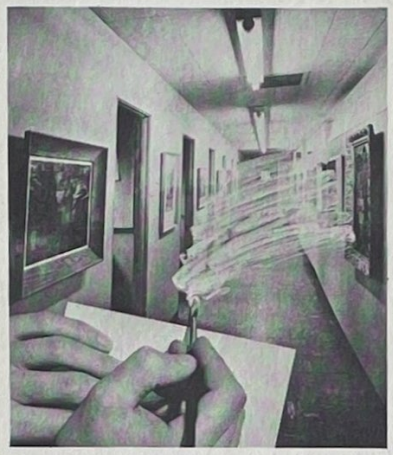
5 Yet another way you can soften the background is by using a gray Bourges sheet. These sheets come in various values, from light to dark. Cover the entire photograph with the sheet and fasten it with tape; then scrape away the tone over the figure with a bone stylus. The Bourges process is explained in the next lesson.

Composite photos

Occasionally, you may have to combine one photograph with another to make a composite picture. You can often instruct the platemaker to do this, but sometimes the artist has to make the combination — especially when a client wants to see in advance what the finished job will look like. On the right we show you a typical problem: The young couple in the small photograph are to be put into the big one. Both pictures have been enlarged to the same scale so the people will "fit" in the big photo.



1 Cut out the figures with a very sharp X-acto knife or razor blade. Tilt the knife at about 45 degrees to undercut the figures at a sharp angle. Then, lay the cut-out figures face down and, with very fine sandpaper, gently sand the edges thin, until you cannot feel the thickness of the paper.



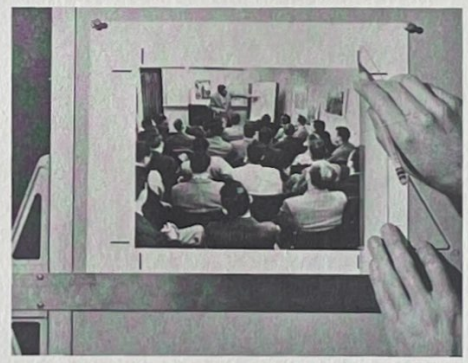
2 Sometimes rubber cement doesn't hold firmly on a glossy photo. To correct this, paint the area where the figures are to be placed with a thin wash of opaque white. Then, spread rubber cement over this area. The excess white can be removed with moist cotton after the job is finished.

3 When the rubber cement is thoroughly dry, dry-mount the figures in position on the background photo and rub the edges with your finger so they are down tight. Then, with a pick-up, clean away excess rubber cement and remove the excess white with a piece of cotton moistened with clean water.

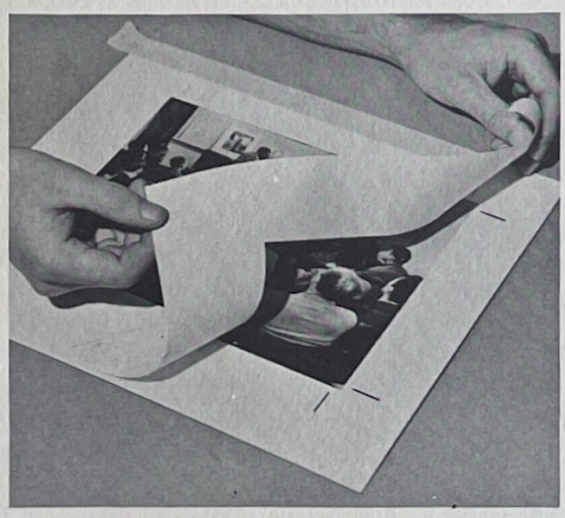
4 Here the composite is almost finished. With opaque retouch grays you can clean up the edges of the figures, remove spots, and put in shadows.

Masking and flapping

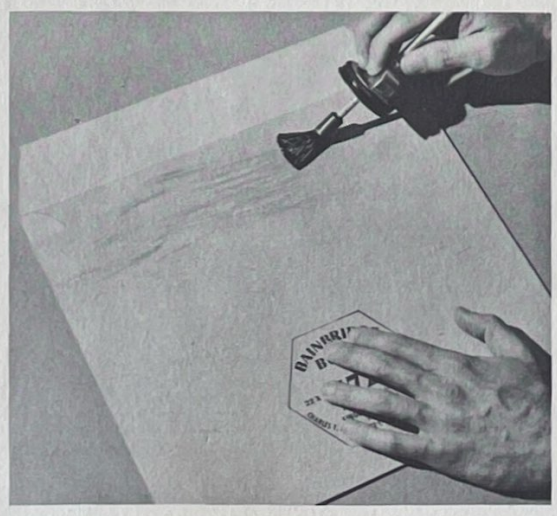
Photographs are usually mounted on mounting board before they are retouched or marked for cropping. Very often studios will cut a mask — a sheet of white bond with the center removed — to frame the photo or the part of it to be reproduced. This mask is usually taped along the top edge of the mounting board. Also, a piece of heavy paper, called a flap, is taped over the job to protect the surface of the photo. The mask and flap give the job a neater appearance and thus are especially advisable when showing a photo to a client.



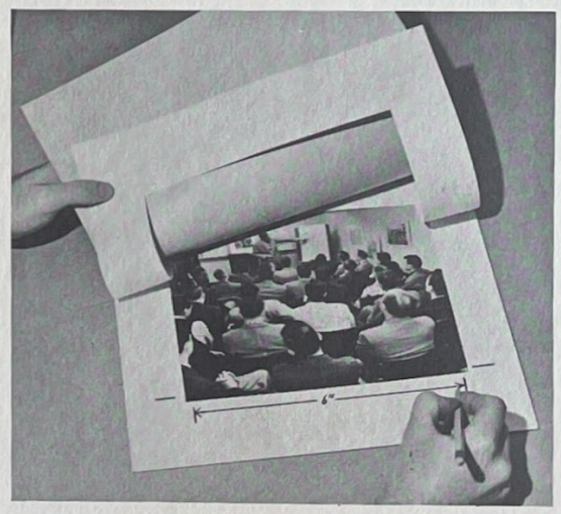
1 Here the photo has been rubber-cemented on mounting board and retouched. Now crop marks are being drawn in pencil with the aid of a T-square and triangle.



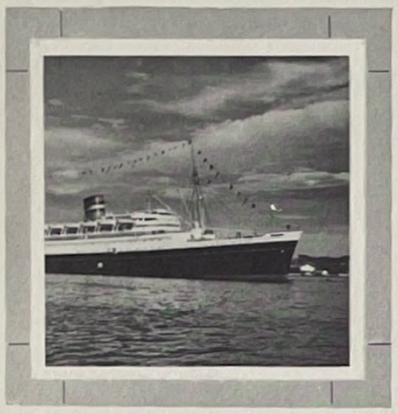
2 Cut a mask of heavy bond paper with inside dimensions exactly fitting the area included by the crop marks. The outside dimensions of the mask are the same as those of the mounting board. Tape the mask along the top of the board.



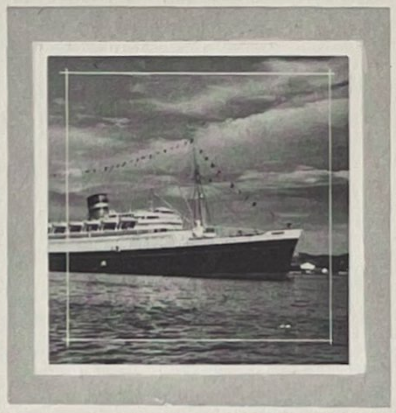
3 Now cut a protective flap of heavy paper — about two inches deeper than the mounting board. Turn the board face down on this flap and dry-mount the extra two inches on the back.



4 Lift both the protective flap and the mask, and mark all instructions on the mounting board, beneath the photo.

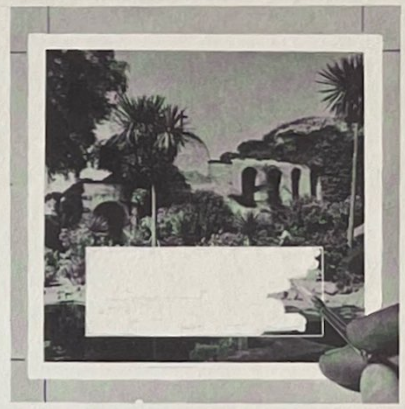


Do draw crop marks on the mounting board outside the photo area in pencil or ink.

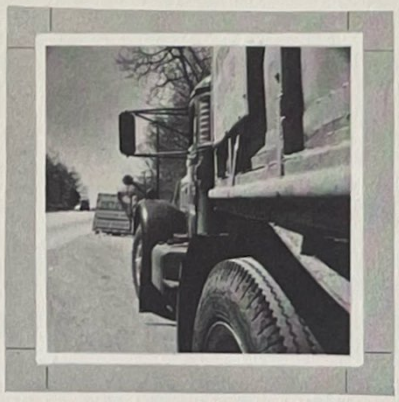


Don't crop a photo by ruling lines directly on it. This method is not accurate.

Do rule a red holding line on an overlay, to indicate a mortise (a clear space in which a caption is often placed). Use register marks, and tape the overlay on top of your photo.



Don't paint opaque white on a photograph to show where a mortise is to be made.

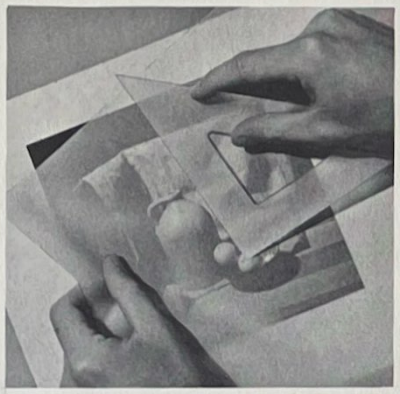


Do retouch corners to match the values in the rest of your photo.

Don't leave very obvious light or dark corners which don't belong in the photograph.

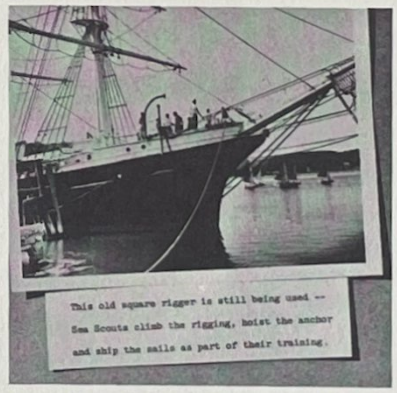
Do have a photo reprinted on larger paper if it needs to be retouched outside the borders. Here retouching was done in the space added at the top.

Don't carry retouching over the edge of a photograph and onto the mounting board as we have done here. This leaves a hard line when the photograph is reproduced.



Do place a tissue over a photograph for protection before pressing with your triangle when cementing it down.

Don't draw a triangle directly over the surface of a photograph when cementing it.


This old square rigger is still being used --
Sea Scouts climb the rigging, hoist the anchor
and ship the sails as part of their training.

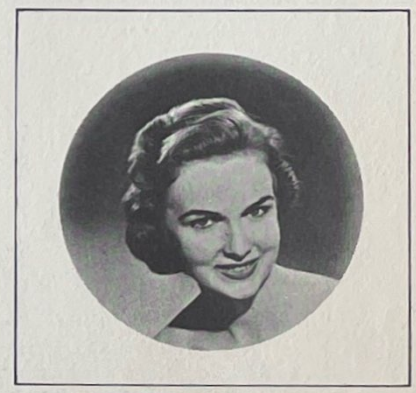
Do attach captions or other slips of paper to the back of an unmounted photograph with tape or rubber cement.

Don't use a paper clip to attach a caption to an unmounted photograph. The clip will damage the picture.

Do write instructions on the margins of the mounting board.

Don't write on the back of a photograph or on a tissue over the front. It will make an indentation in the picture.

Do vignette a photo — that is, shade it off gradually — about a quarter to half an inch beyond the area that is to be reproduced. The platemaker will then be able to make the soft edge required.



Don't vignette a photo to the exact edge that you want the finished vignette to have when reproduced or the edge will be hard.

Mechanical aids in illustration

Here are several methods you can use that will save you time, occasionally cut down plate costs for your client and insure accurate, foolproof reproduction of black and white drawings.

The examples at the right show three practical methods for making line drawings. The Craftint and Zip-a-tone processes permit you to add tonal effects to a line drawing and still have it reproduced as an inexpensive line cut.

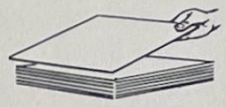
The Kemart process (described below) is one of several similar processes which have many applications in commercial art.

Kemart and similar processes

The Kemart process is widely used in preparing tonal art for reproduction. The artist works in wash, opaque, pencil, or crayon in combination with the fluorescent Kemart materials shown immediately below. This process allows him to have his work reproduced the way he paints it with full brilliant whites. In the standard method of platemaking these whites are normally not obtained without a great deal of hand work by the platemaker. The results you can get with this process are illustrated in the four tonal pictures below. Fluorographic and Kromolite are two similar processes. All are often used for art to be reproduced in newspapers. Their commonest use is in making fashion drawings and retouching photos.

Each method is handled a little differently, so before attempting to use them in your art, you must first check your platemaker to see which process he is equipped to handle. He can probably supply you with materials and directions on how to proceed. If not, both materials and directions can be obtained from your art dealer.

Important: Art work containing fluorescent materials should be clearly labeled to that effect, so it will be handled correctly.



Strathmore-Kemart illustration board or drawing paper

Kemart highlight white

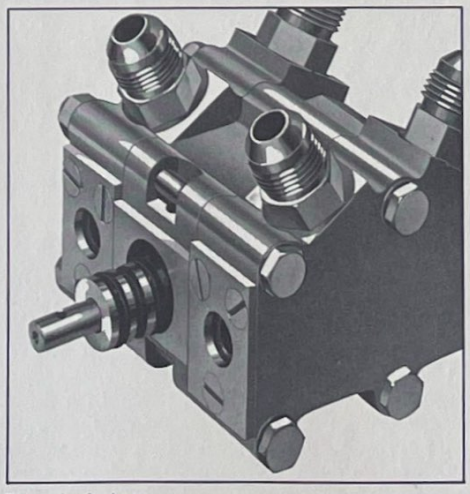
Kemart artist's light

Kemart brightener

Wash

Pencil

Opaque



Retouched photo

Silverprint

This is a fast and accurate method of making line drawings from photographs, in which the artist draws directly on the photo. It is particularly useful for making product drawings where accuracy is necessary. The artist usually works in cooperation with a photographer who makes a very light print (called a silverprint) on matte paper and later bleaches out the photographic image, leaving only the ink drawing. The photographic image is kept light, so that its darkest tones won't conflict with the ink lines as the artist draws them in.

If you find it necessary to bleach the print yourself, the bleaching solution can be obtained from a photo supply store. Great caution should be exercised when using this solution because it usually contains ferricyanide.

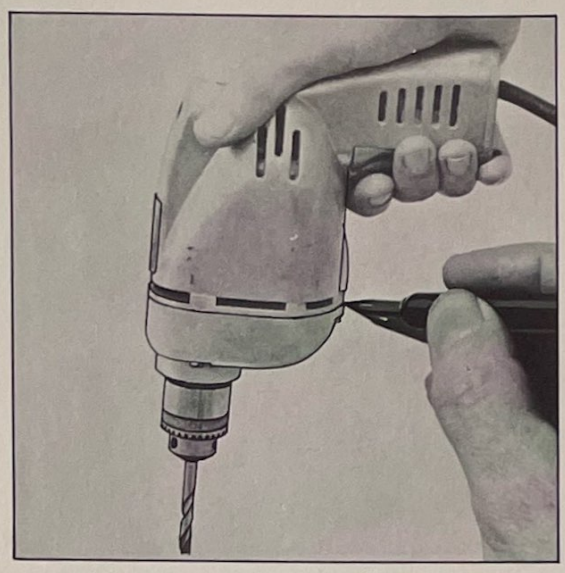
Craftint

This is a convenient method that enables you to add flat tones to a line drawing and still have it reproduce as a line plate. Craftint papers, on which the drawing must be made, come in single tone or double tone in a variety of screen patterns. This demonstration shows how to use the double tone, which contains two invisible screens, one light and one dark. By applying Craftint developers with brush or pen, you make the screens become visible as tones wherever you wish them. You may choose from a number of screen patterns, depending upon the effect you want.

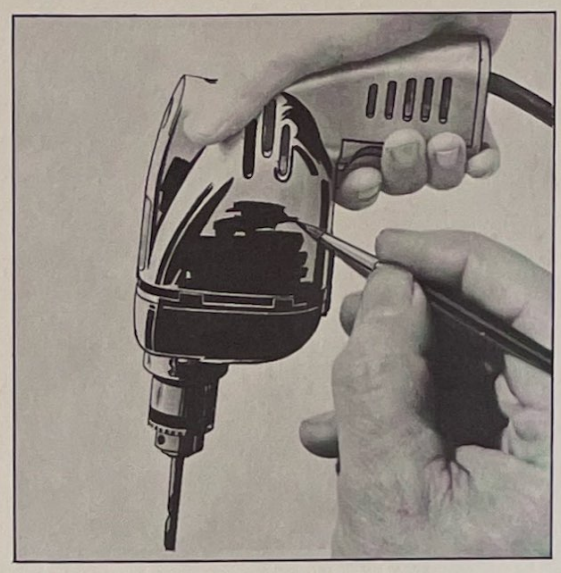
Zip-a-tone

This is another quick and easy way to add areas of tone to a line drawing. The drawing will reproduce as a simple line engraving. The Zip-a-tone sheet is a transparent sheet covered with minute dots or lines. It is applied over the drawing, and then portions of the sheet are removed where you do not want the tonal effect. There are many patterns and screens to choose from, depending on the effect you want and the amount of reduction.

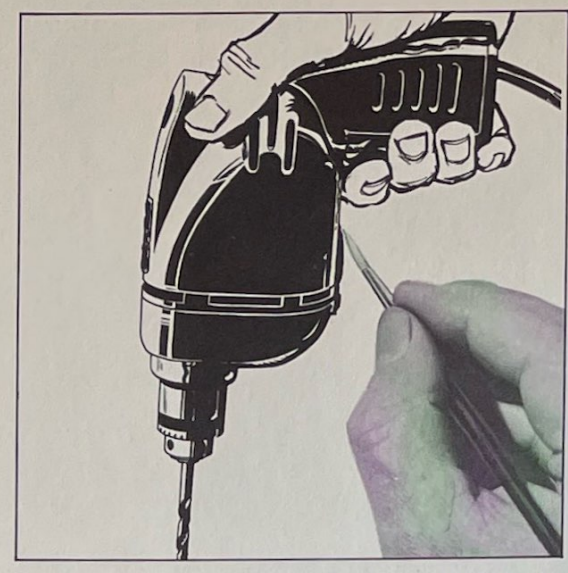
Tones achieved by the Zip-a-tone and Craftint processes are more severe and less subtle than those created by dry brush, wash, or crayon, but they are both practical and appropriate in many cases. They are particularly good for newspaper reproduction.



1 All four edges of the silverprint are carefully taped to a mounting board to keep the silverprint from buckling or curling. The line drawing is begun directly on the silverprint with pen or brush and waterproof black India ink.



2 A brush is used to paint in large black areas — it can also be used to vary the quality of the outlines, keeping them from looking too mechanical except where that is desired.



3 When the ink is dry, the print is placed in a tray of bleaching solution and rocked back and forth until the photographic image completely disappears, leaving only the line drawing. The print is then washed in water for half an hour and dried between blotters under a weight to keep it flat. It can now be mounted and touched up with black or white if necessary.

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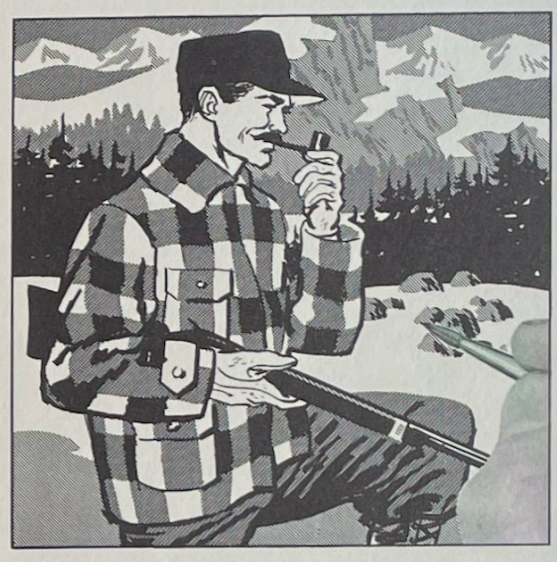
1 Working on Craftint paper, you first pencil in the drawing, then ink it with pen or brush and waterproof India ink. Here virtually all the <u>black</u> ink tones have been put in. To keep the surface clean, it is best to use a slip sheet under your hand — fingerprints will repel the developing solutions.

2 With a <u>clean</u> brush or pen, apply the <u>dark</u> tone developer first on the areas where you want a dark halftone effect. Apply enough developer to bring up sharp, even tones, but blot up excess developer immediately. Develop all dark tones before starting the light ones.



3 After all dark tones are developed, use another <u>clean</u> brush or pen and apply light tone developer to bring out light grays where you want them. Again, blot immediately with a clean blotter. After the surface is dry, erase any pencil lines with Artgum and add black or white accents if you wish.

---

1 First make a line rendering with brush or pen and ink, keeping in mind where you will use the screen tone. Be sure to erase all pencil lines and make any necessary corrections with thin opaque white <u>before</u> applying the Zip-a-tone sheet.

2 Cover your line drawing with a sheet of Zip-a-tone and rub it down <u>lightly</u> with a burnisher or the bowl of a spoon to make the sheet adhere to the drawing. Protect the Zip-a-tone with a sheet of paper while burnishing. With a razor blade or frisket knife, cut lightly through the Zip-a-tone sheet around the areas you plan to strip away.

3 Peel off areas where the screen is not wanted, being careful not to tear the portion that will remain. Now, cover the drawing with a protective sheet of paper and burnish the screened areas thoroughly. If an air bubble appears under the Zip-a-tone sheet, cut a small slit to let the air escape and rub down again.

Type composition

Virtually every piece of printed matter you design will contain some written material called "copy." You will have it set in type by a typesetter or typographer, so you must be able to specify to him what type he is to use and how he is to set it. Whether this copy is a small caption under a picture — or a large headline — you must design it with great care. To do this well, it is necessary for you to know the fundamental principles of typesetting and the terms used in specifying type. Here and on the following pages we will give you this essential information. You will find it even more meaningful if you can visit a type shop and discuss these principles and terms with the typographer. Some typographers supply their clients with a book showing samples of the faces they stock — others supply a list, and the designer must buy or borrow a book from which to work.

The design of typography is important — it is essential to good layouts — and it can be a fascinating and rewarding craft. Develop your skill in designing and specifying type by noting effective examples of typography, and check them against a type book to see what faces and sizes were used. Review Lesson 17 on lettering, which contains valuable demonstrations of fundamentals that apply as much to type as to hand-lettering.

Points. The size (height) of type is measured in points. There are 72 points to an inch — one point equals 1/72 of an inch. This line you are now reading is set in 10-point type, which means that from the top of the highest capital or lower-case ascender to the bottom of the lowest descender, plus the shoulders top and bottom, is 10 points, or 10/72 of an inch.

Picas. The length of a line of type is measured in picas. There are 6 picas to an inch, so each pica equals 12 points. This column is set 23 1/2 picas wide.

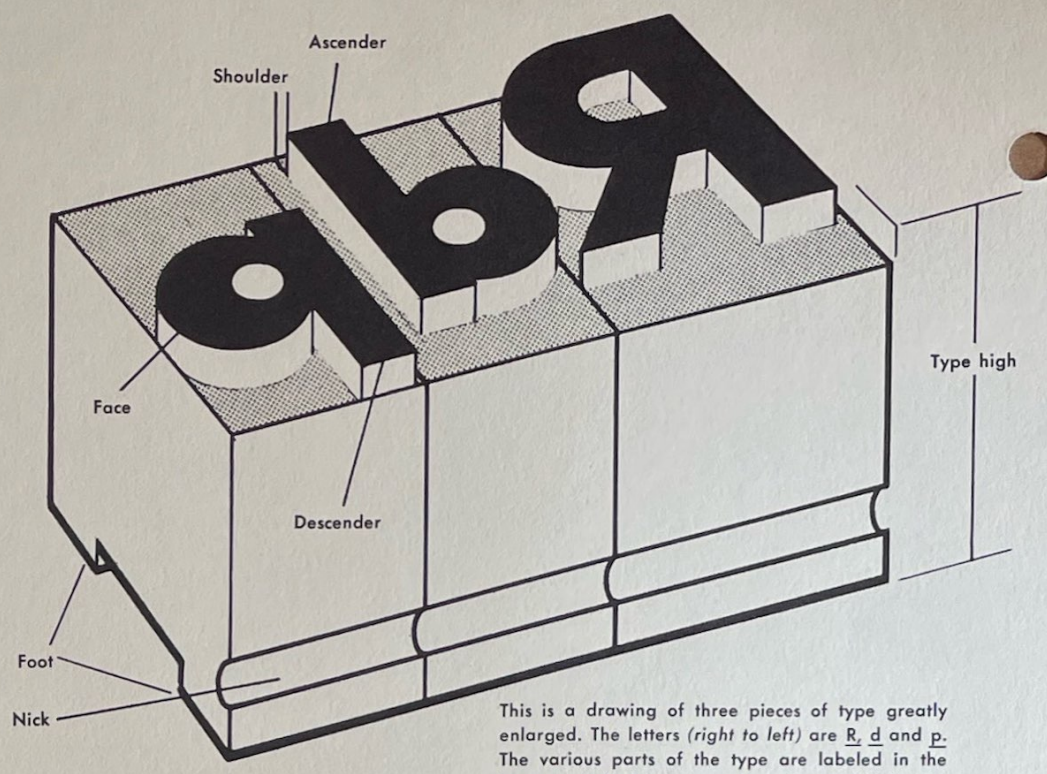
Linotype and Intertype. These are two machines that set type in such a way that all the characters in a line are cast or molded in one piece of lead, called a "slug." These slugs are economical to handle, but if there is a typographical error (called a "typo") in the line, the entire line must be reset. Linotype and Intertype machines are generally used to set large blocks of copy, as in books, newspapers and booklets.

Monotype. This machine casts or molds one character at a time. These characters are brought together to form lines of type. Typos can be corrected by changing one letter at a time. Monotype composition is therefore more flexible than Linotype or Intertype and is particularly useful where special spacing is called for, as in tabulated material or where there are apt to be numerous typographical changes. Monotype composition is generally more expensive than Linotype or Intertype.

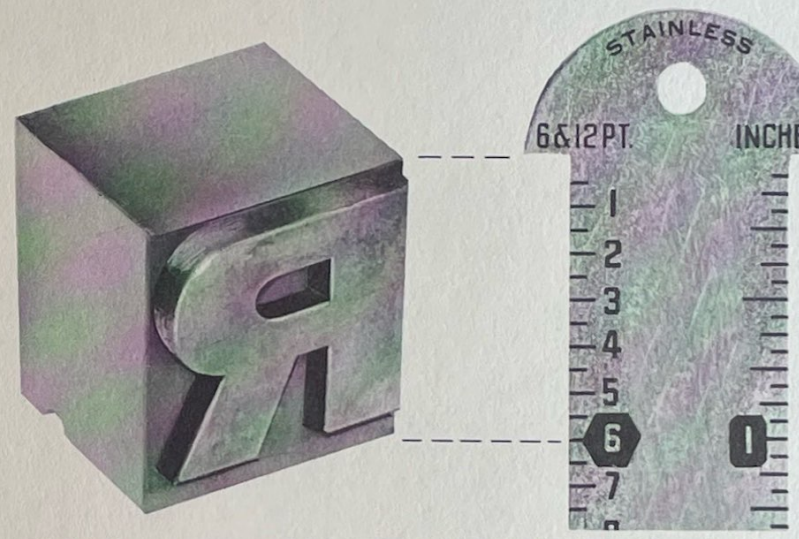
Ludlow. This combines hand setting and machine casting. The molds, or matrices, for the type are set by hand and put in a machine which casts a solid slug. Ludlow is used mostly for setting display type, which is explained below.

Hand-set type. Hand-set or foundry type is set by hand, which permits the most subtle adjustments of spacing. It is the most expensive kind of composition and is generally used where the highest quality of typography is demanded, where the copy is short, or special display arrangements are required.

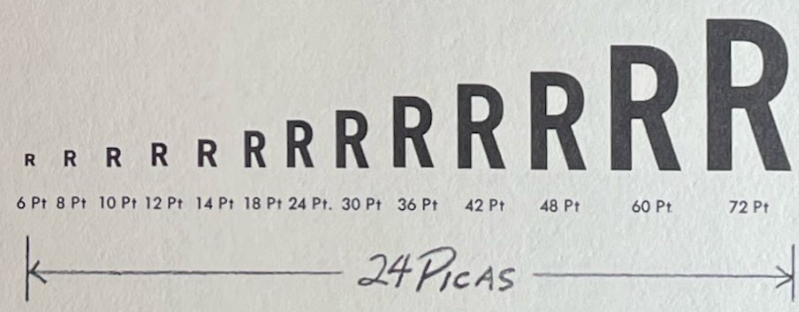
Type on film. Various new machines now set type by photography. The principles of specifying phototype are basically the same as for metal types.



This is a drawing of three pieces of type greatly enlarged. The letters *(right to left)* are R, d and p. The various parts of the type are labeled in the language of the typographer. Type high is the distance from the foot to the face — 0.918 inch.



The size of type is measured in points. One inch equals 72 points. The piece of type shown in this enlarged illustration is 72-point. There are 12 points in a pica. The type ruler *(right)* shows that this type measures 6 picas — or 72 points — or one inch. Below are letters ranging from 6 points to 72 points.



While the height of type is measured in points, the length of a line of type is always measured in picas. The line of type shown above measures 24 picas.

An important consideration in ordering type is weight — that is, the thickness or thinness of the type. Most types have a regular weight and a boldface. The examples above are Futura, which has several weights, ranging from light to black.

Characters in a Font

CAPS

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

& . , - : ; ‘ ’ “ ” ! ? [ ] ( )

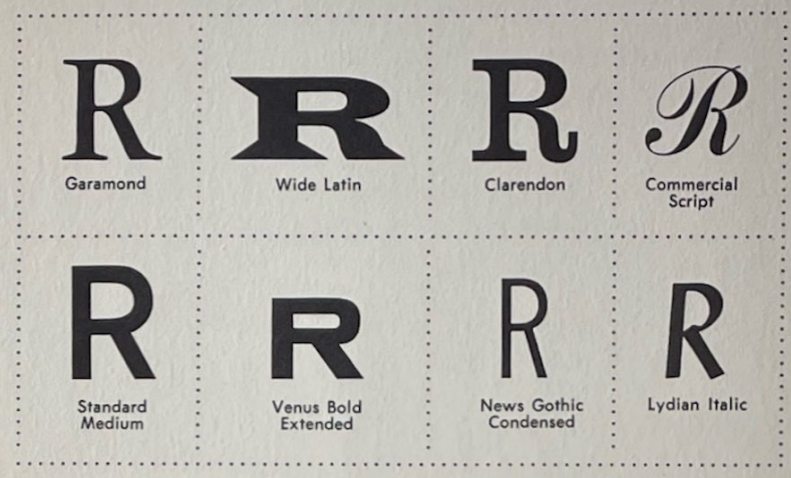
LOWER CASE

a b c d e f g h i j k l m n o p

q r s t u v w x y z ff fi fl ffi ffl

FIGURES

$ 1 2 3 4 5 6 7 8 9 0

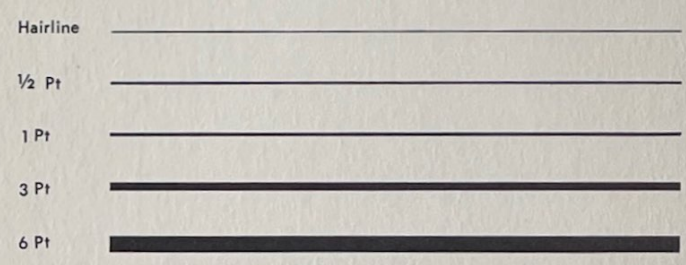


Varieties of type

Fonts. A font is a complete assortment of type of the same face and size. It includes lower-case letters, capitals, numbers and punctuation marks.

Varieties of type. The designer has a wide variety of styles or faces of type to choose from. A few examples are shown at the upper right. Within any one style there is a great choice of sizes and weights. For example, Futura comes in all sizes of the following weights: light, medium, demibold, bold, and black. Most of these are available in italics as well as roman, or vertical letters, and some in condensed and extended faces. Don't use a variety of type faces on a single job just because they are available. The best typographic designers seldom use more than three different faces on one job.

Rules. A rule is a metal strip that prints as a line or lines. Rules can be used to make decorative boxes or borders. They come in various designs, point sizes, and lengths. Several sizes, from a hairline to 6 point, are shown at the right.



Rules

Leading. This is the printer's term for spacing between lines. Lines of type can be leaded as many points as desired. Machine-set type can be leaded the desired amount by having the type cast on a larger-size slug. The 10-point type in which this textbook is printed was set on a 12-point slug, which is the same as adding 2 points of leading. At the right are examples of 10-point type set solid and with two and four points of leading.

The table below will give you some guidance in determining how much lead to use with type of different sizes. It is intended to be used as a rule of thumb and should not be followed to the letter.

Type size	Minimum leading	Maximum leading
6 point	solid	1 point
8 point	solid	2 point
10 point	solid	4 point
11 point	1 point	4 point
12 point	2 point	6 point
14 point	3 point	8 point

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance

10 Pt Caledonia Solid x 18 Picas

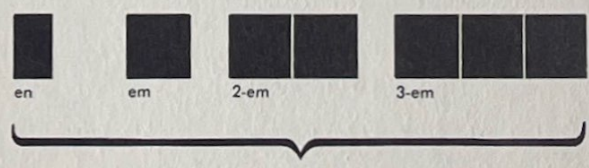
As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance

10 Pt Caledonia 2 Pt Lead x 18 Picas

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance

10 Pt Caledonia 4 Pt Lead x 18 Picas

Ems. The unit for measuring spacing in any size type is the "em quad," which is a space as wide as the height of the type. For example, a 24-point em quad is 24 points high and 24 points wide. An en quad is the same height as an em quad but only half as wide. Indentions are often expressed in ems – for example, indented paragraph openings in this text begin one em, or 10 points, from the type margin.



Quads for 24 Pt

Body and display. The type in which the principal text is set is often referred to as "body type," to distinguish it from the larger type used to set headlines and display material. The larger sizes of type, used decoratively or to attract attention, as in headlines, posters, and billboards, are called display type.

Letterspacing. Words in capital letters are not as easily read when set solid, like this: LETTERSPACING. They are more easily read when letterspaced like this: L E T T E R S P A C I N G. A two-point space was added between every two letters. Too much letterspacing can also make the copy hard to read. Generally, for legibility and appearance, words set in lower-case letters should not be letterspaced.

LETTERSPACING
Solid

LETTERSPACING
1 Pt

LETTERSPACING
2 Pt

L E T T E R S P A C I N G
4 Pt

Galley proofs. After type has been set, it is placed in a long, shallow tray or drawer called a galley, and a proof is pulled for proofreading. This is called a galley proof, or rough proof, and it is usually pulled on a long narrow sheet. Corrections are marked in the margins. When many corrections are made, it is often wise to request a revised galley proof. After the type has been arranged in its final position, a "page" proof is sometimes pulled for further proofreading.

Repro proof. Reproduction (repro) proofs are printed with exacting care on smooth-surfaced stock so that they can be photographed for reproduction by offset printing or for engravings.

Proofreading. The person who reads the printer's proofs is called a proofreader. It is his job to indicate all errors on the proof, and be sure that the words set in type correspond with those in the original manuscript – provided, of course, that the original was correct. He should indicate his corrections by using standard proofreader's marks. Some of the marks most commonly used are shown in the box at the right. If you have anything at all to do with type, you should know how to use proofreader's marks.

When all changes and corrections are indicated on the galley proof, a repro proof is ordered if the job is to be printed in offset or if an engraving is to be made. The artist should carefully examine the repro for specks, broken letters, unevenness of inking, and faithful adherence to specifications.

PROOFREADERS' MARKS

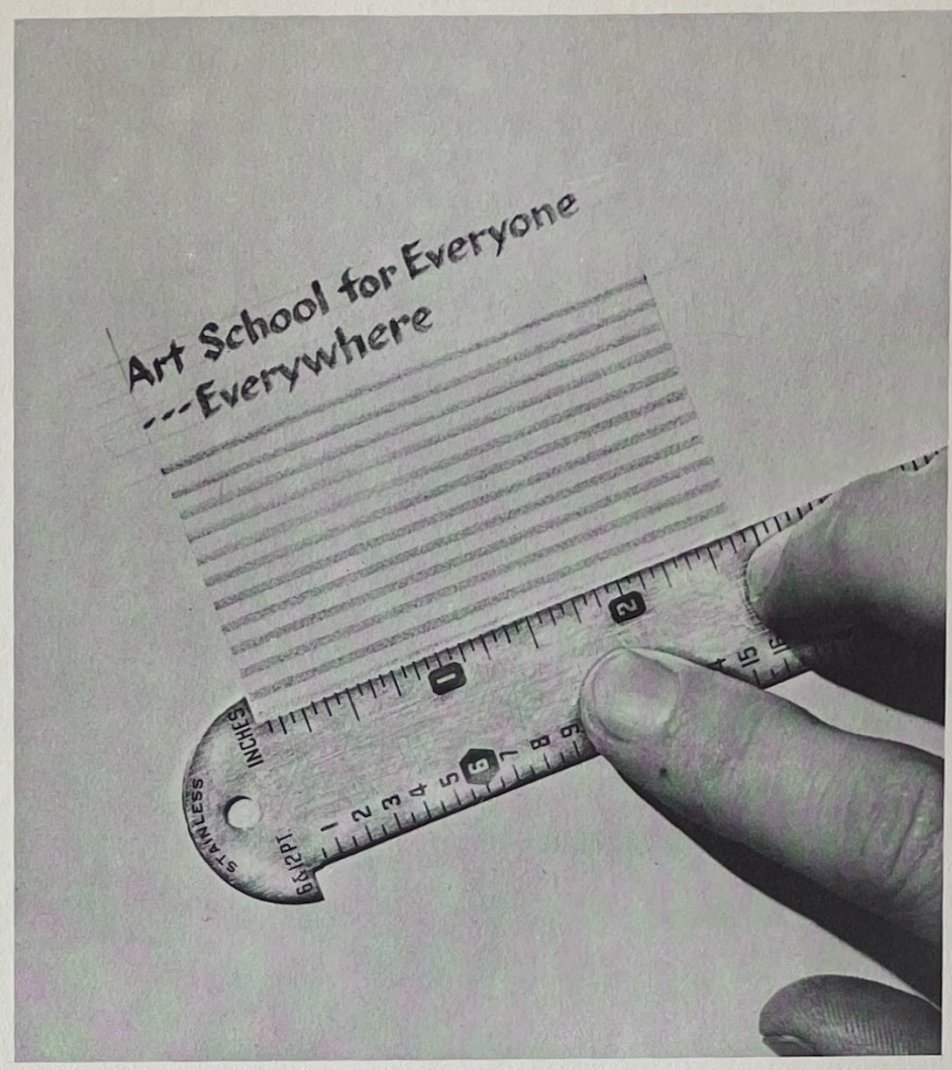
Correction Required	How to Indicate Correction
Remove letter and close up	He marked the prooof.
Remove word	He marked the the proof.
Insert space	He marked theproof.
Turn inverted letter	He marked the proof.
Set in lower case	He Marked the proof.
Reset in italics	He marked the proof.
Reset in roman (not italics)	He marked the proof.
Reset in boldface	He marked the proof.
Insert period	He marked the proof
Transpose letters or words	He the proof marked.
Let stand as is	He marked the proof.
Insert hyphen	He made the proofmark.
Equalize spacing	He marked the proof.
Wrong font	He marked the proof.
Broken letter	He marked the proof.
Move left (or right) to point indicated	He marked the proof.
Insert comma	Yes he marked the proof.
Insert apostrophe	He marked the boys proof.
Enclose in quotation marks	He marked it proof.
Replace with a capital	he marked the proof.
Use small capitals	He marked the proof.
Draw the word together	He m arked the proof.
Spell out word marked	He marked the 2nd proof.
Add word left out	He marked proof.
Start new paragraph	reading. The reader marked
Run in	the proof.
Query to author	The proof read by
Out of alignment. Straighten	He marked the proof.
Indent 1 em	He marked the proof.

Copy fitting

As a commercial artist working with layouts, you must know how to handle copy fitting. Usually, you will be given one or more typewritten sheets of copy (manuscript) which must be set in type within a certain area in your layout. You must specify what type face to use — its size — how wide to set it, and other details. This is called "copy fitting" or "copy casting."

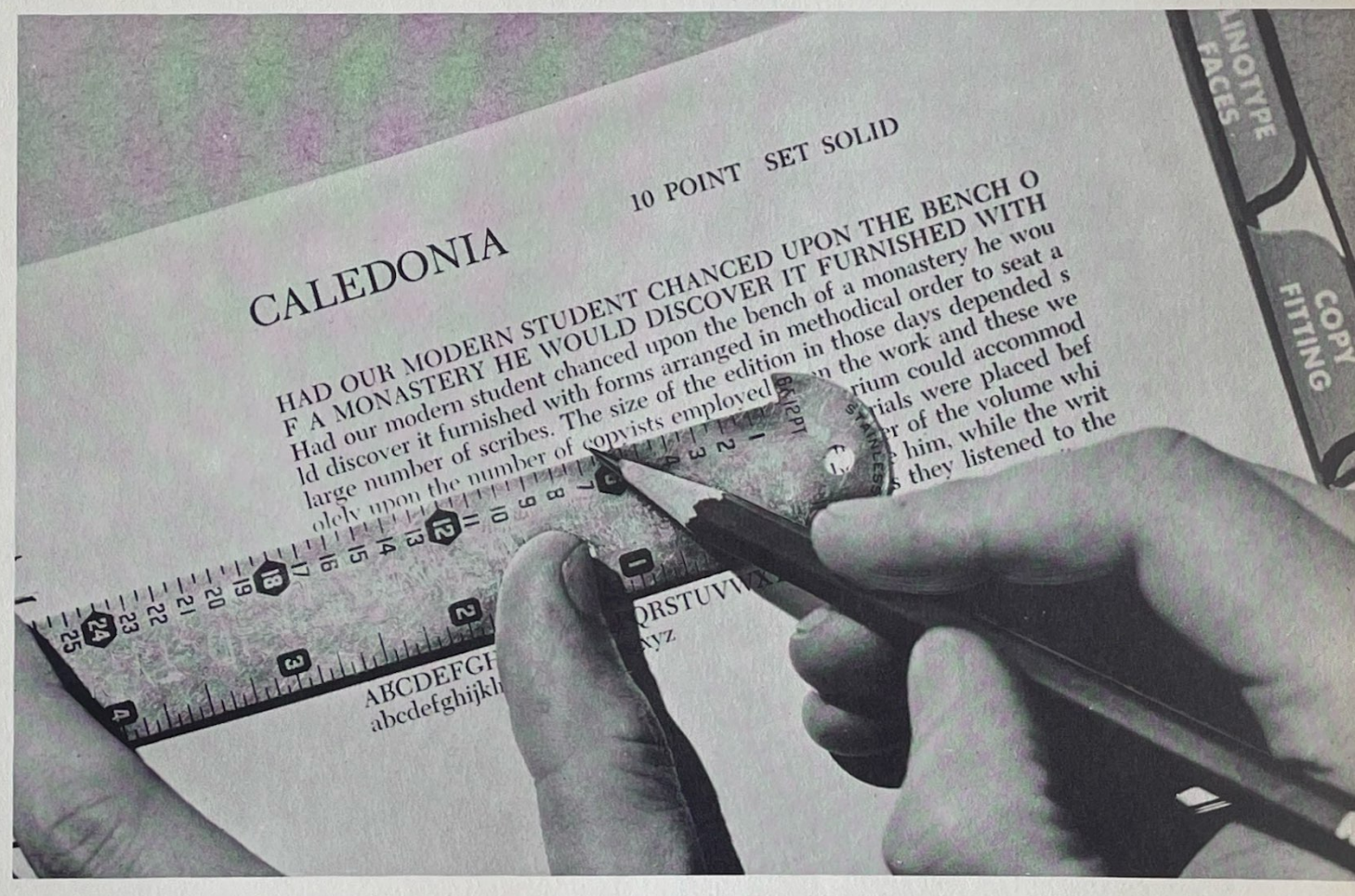
There are many methods of copy fitting, but all amount to about the same thing. Here we are going to demonstrate a basic character-count method. Once you understand this procedure, other methods will be quickly and easily learned.

In copy casting you will put to use the principles you have learned in the previous pages on type composition. You must not only understand what you want, but you must be able to speak the typographer's language and interpret your thinking to him clearly and exactly so that he can follow your directions.



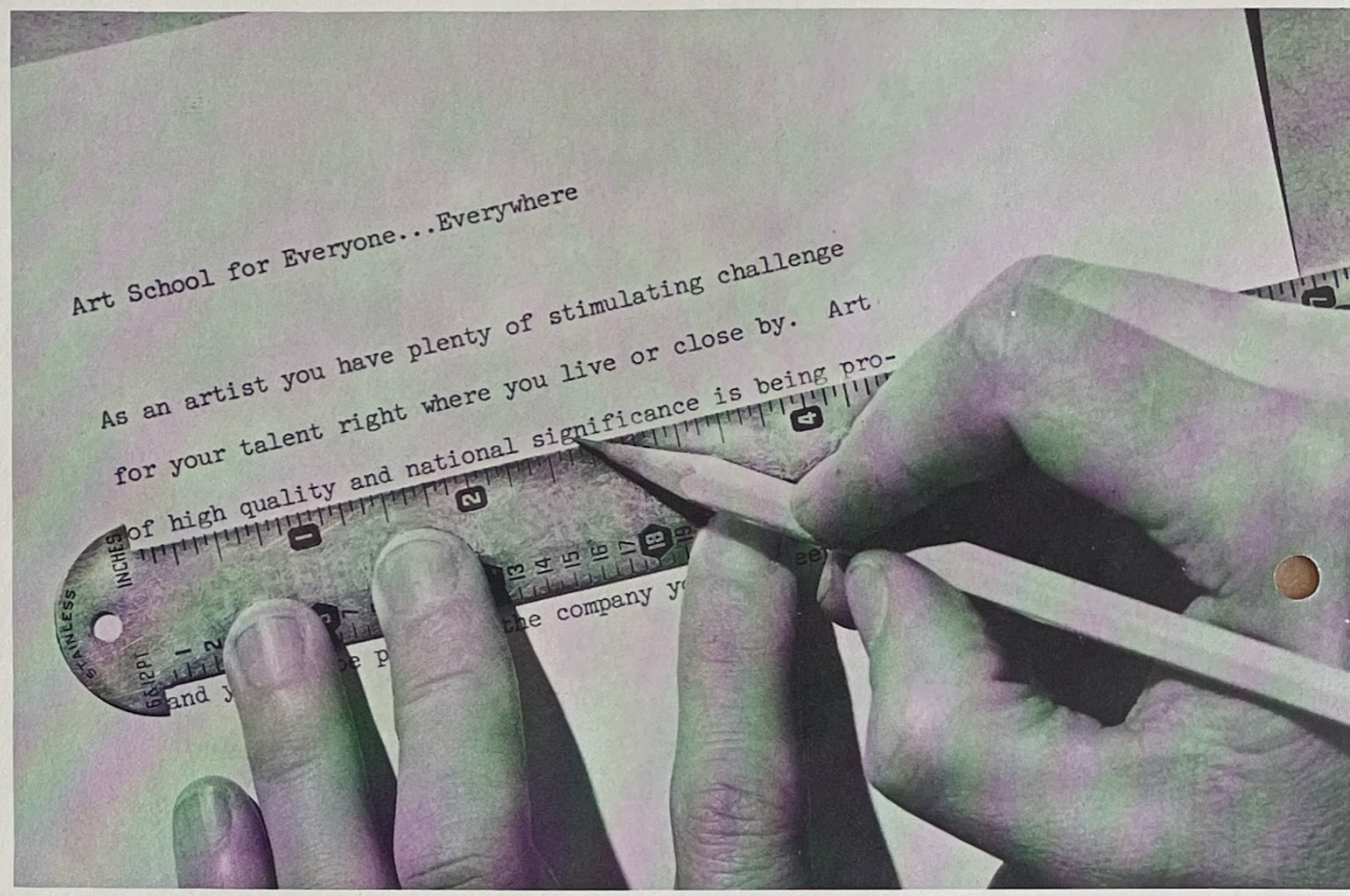
1 You have been given a typewritten sheet of copy which you must fit into your layout and specify type for. First, with a pica ruler measure the width of the copy area in your layout. This is the area that your type must fit into. Here it measures 16 picas in width and 8 picas deep. Next, you select the type face that you want to have your copy set in. In this example, we have selected 10-point Caledonia, shown below.

2
Lay your pica ruler over a sample of your chosen type face in your printer's sample book and count the number of characters within your 16-pica measure. Don't forget to count as one character each space between words, and each punctuation mark. Ten-point Caledonia will contain about 42 characters in a 16-pica measure.


CALEDONIA
10 POINT SET SOLID
HAD OUR MODERN STUDENT CHANCED UPON THE BENCH O
F A MONASTERY HE WOULD DISCOVER IT FURNISHED WITH
Had our modern student chanced upon the bench of a monastery he wou
ld discover it furnished with forms arranged in methodical order to seat a
large number of scribes. The size of the edition in those days depended s
olely upon the number of copyists employed
LINOTYPE FACES
COPY FITTING

3

Now take your sheet of typewritten copy and count the same number of characters in this copy as you found within 16 picas of Caledonia. We demonstrate this method here by making a quick count over a ruler. You don't have to count each individual letter and space if you remember that in an elite typewriter face there are 12 letters per inch, and 10 letters per inch in a pica typewriter. Also, we have put a character-counting gauge for pica and elite typewriters at the bottom of this and the next page.

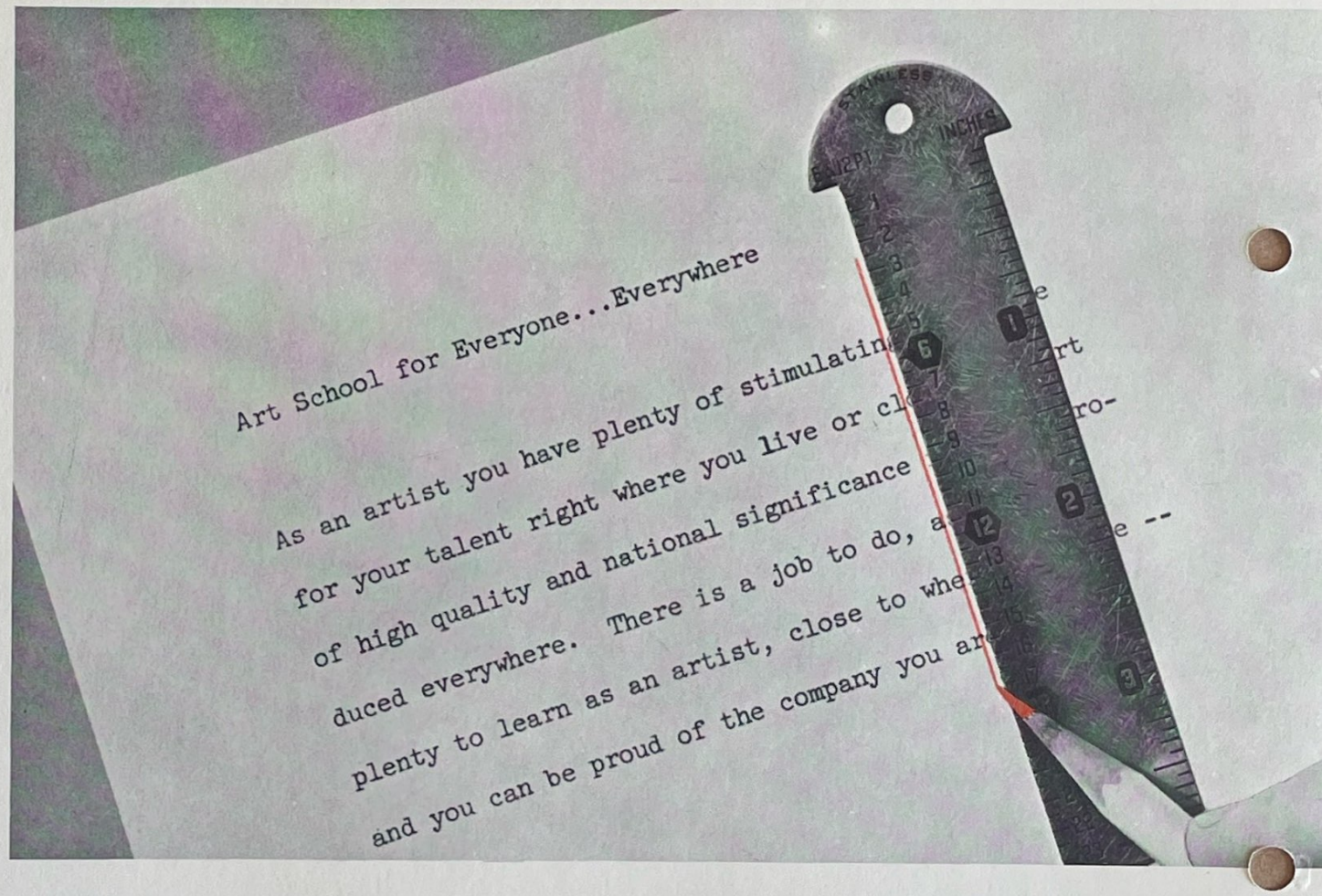

Art School for Everyone...Everywhere
As an artist you have plenty of stimulating challenge
for your talent right where you live or close by. Art
of high quality and national significance is being pro-

4

Place your pencil against your ruler and draw a vertical line lightly down your manuscript (at the 42-character width). Now count the number of lines that contain 42 characters and then carefully estimate the total number of characters to the right of the vertical line. There are about 58 characters on the right, or one and a half lines. These must be added to the number of lines that you have already counted, which would give you a total of eight lines. The chart below will help you to determine the depth your copy will run by showing you the number of lines per inch in 6-point to 18-point type. When using the chart, remember to include leading — for example, 8-point type with 2-point lead would be read as 10 points.

LINES PER INCH

Point size	Number of lines
6	12
8	9
9	8
10	7+
11	6½+
12	6
14	5+
18	4

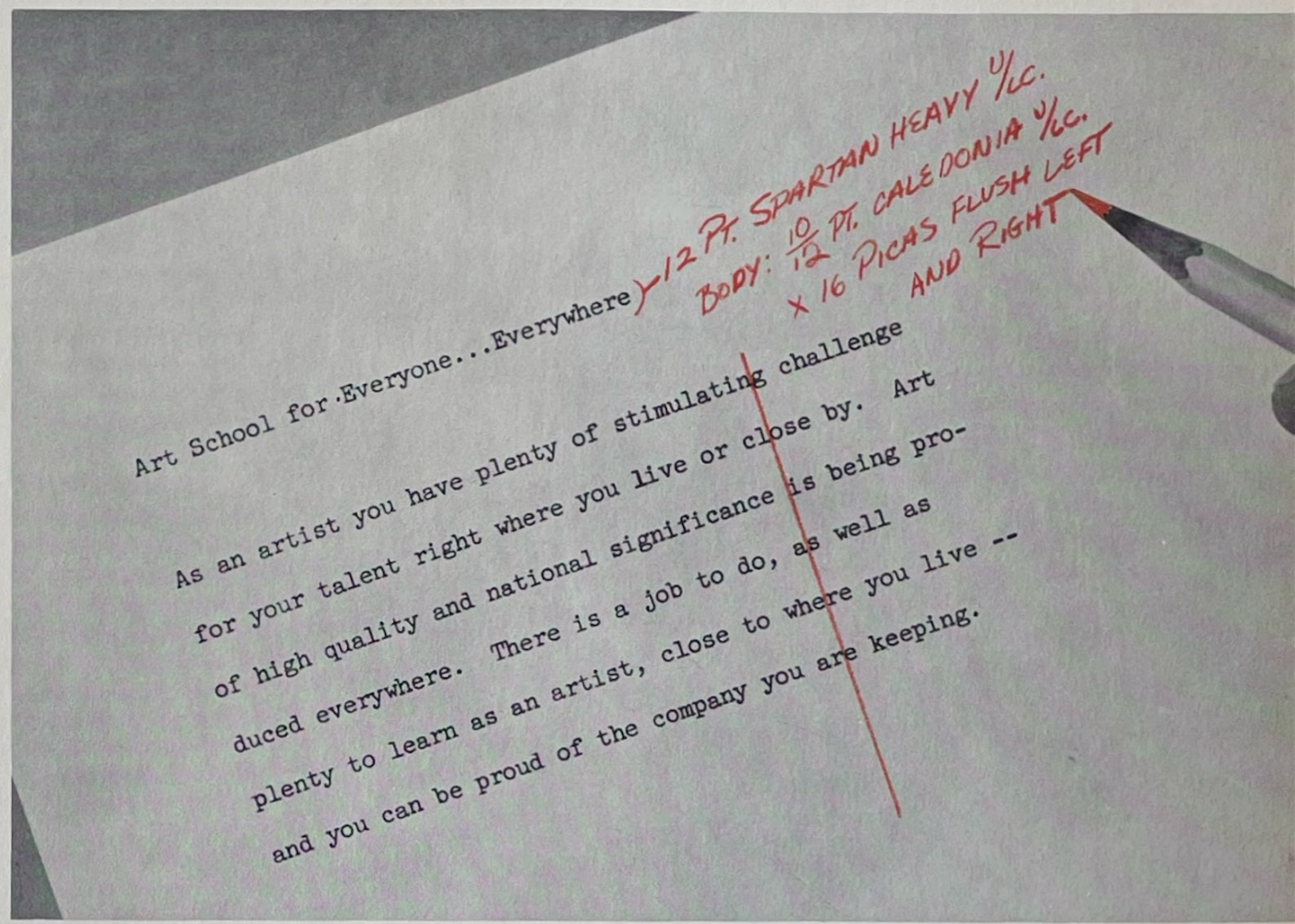

Art School for Everyone...Everywhere
As an artist you have plenty of stimulatin
for your talent right where you live or cl
of high quality and national significance
duced everywhere. There is a job to do, a
plenty to learn as an artist, close to whe
and you can be proud of the company you ar

PICA • **Use This Guide to Count Characters in Pica Typewriter Copy**

```
          10        20        30        40        50        60        70        80
|123456789|123456789|123456789|123456789|123456789|123456789|123456789|123456789|
```

5

Now mark instructions to the typographer on the typewritten manuscript, preferably at the top of the sheet, where they can be easily seen. Tell him the type face, where to use upper and lower case (U/LC), the size and leading, how wide the copy is to be set, and whether you want it set flush right and left or whether you want ragged or irregular margins. Also, select the type face for your heading or headline and mark that in the same way. Below is a sample of the type set as marked. Also there is a sample set a little smaller and there is another set a little larger. These show you that if you have not cast your type correctly it will come out either too short or too long.


Art School for Everyone...Everywhere
As an artist you have plenty of stimulating challenge
for your talent right where you live or close by. Art
of high quality and national significance is being pro-
duced everywhere. There is a job to do, as well as
plenty to learn as an artist, close to where you live --
and you can be proud of the company you are keeping.
12 PT. SPARTAN HEAVY U/LC.
BODY: 10/12 PT. CALEDONIA U/LC.
X 16 PICAS FLUSH LEFT
AND RIGHT

Art School for Everyone . . . Everywhere

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live — and you can be proud of the company you are keeping.

10 on 12 Pt Caledonia

Art School for Everyone . . . Everywhere

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live — and you can be proud of the company you are keeping.

8 on 10 Pt Caledonia

Art School for Everyone . . . Everywhere

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live — and you can be proud of the company you are keeping.

12 on 14 Pt Caledonia

Use the guide below and on the previous page for a quick method of character counting from typewritten copy. Simply lay it over your manuscript and read the number of characters on the scale.

ELITE • Use This Guide to Count Characters in Elite Typewriter Copy

```
          10        20        30        40        50        60        70        80        90       100
|123456789|123456789|123456789|123456789|123456789|123456789|123456789|123456789|123456789|123456789|
```

Do's, don'ts, and suggestions

Ragged margins: When designed with care and good taste, ragged left and right margins can be very beautiful. But when the design is haphazard, as shown here, the copy is almost impossible to read.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is

10 Pt Caledonia 6 Pt lead–ragged left & right

Too short a measure: The setting below is called a run-around and is commonly used to fit type around a photograph or piece of art work. The danger is that the short lines may be too short for attractive typesetting. Notice the amount of letterspacing necessary to fill out these lines. Avoid run-arounds like these whenever possible.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is only as big

10 Pt Caledonia with run around

Study the letters: To determine the amount of leading to use between lines, study the ascenders and descenders of the type face you are using. The paragraphs below are both set in 10-point type, with no leading. Notice that the long descenders and ascenders of Garamond give this type a leaded look, while in Century the ascenders and descenders are short, making the copy block look too tight for easy reading.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live—and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it—a fact that is being proved daily all over America where art is

10 Pt Garamond set solid

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live—and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who

10 Pt Century set solid

Compatible and incompatible boldface: Many times you will find a need to emphasize words in a paragraph. The paragraph below demonstrates the use of compatible boldface—that is, this boldface can be set on the linotype machine without difficulty. The boldface words in the bottom paragraph demonstrate an incompatible treatment. There the boldface was set in a completely different face and had to be "cut" into the lines by hand or "mixed" on the machine. This often looks very good but usually costs about 40 per cent more.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. **There is a job to do,** as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it – a fact that is being proved

10 Pt Caledonia with Bold

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. **There is a job to do,** as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it – a fact that is being proved

10 Pt Caledonia with Spartan Heavy

Using decorative initials: A decorative capital initial is arresting and often beautiful. But it has to be cut into the linotype by hand, and is therefore bound to make your job cost more. This is not an admonishment against its use — it is simply a warning not to use it on budget jobs.

THERE IS A JOB TO DO, as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it – a fact that is being proved daily all over America where art is bought. Today the National Society of Art Directors has more than twenty-five member clubs in various sections of the United States, and there are many related and similar art organizations from coast to coast. All are focal points for vigorous and competitive regional advertising and editorial art. New York no longer has a monopoly of the creative

10 Pt Caledonia with large Cap Initial

Italics — and too small: It is unwise to set a large block of copy all in italics. Italics have their uses — for emphasis or a change of pace — but they become hard to read when the copy is long. The second paragraph clearly demonstrates what happens when type is too small. If you have an important message, make sure that it is set large enough for easy reading.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is only

10 Pt Caledonia italic set solid

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live — and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it — a fact that is being proved daily all over America where art is bought. Today the National Society of Art Directors has more than twenty-five member clubs in various sections of the United States, and there are many related and similar art organizations from coast to coast. All are focal points for vigorous and competitive regional advertising and editorial art. New York no longer has a monopoly of the creative and quality commercial art market.

6 Pt Garamond set solid

Minimum and maximum word spacing: Study the two top paragraphs below and you will see that both tight word spacing and loose word spacing make copy hard to read. Don't try to force too much copy into too little space, or vice versa. The third example is just right.

Today the National Society of Art Directors has more than twenty-five member clubs in various sections of the United States, and there are many related and similar art organizations from coast to coast. All are focal points for vigorous and competitive regional advertising and editorial art. New York no longer has a monopoly of the creative and quality

10 Pt Caledonia—tight word spacing

Today the National Society of Art Directors has more than twenty-five member clubs in various sections of the United States, and there are many related and similar art organizations from coast to coast. All are focal points for vigorous and competitive regional advertising and editorial art.

10 Pt Caledonia—loose word spacing

Today the National Society of Art Directors has more than twenty-five member clubs in various sections of the United States, and there are many related and similar art organizations from coast to coast. All are focal points for vigorous and competitive regional advertising and editorial art. New York no longer has a monopoly of the creative

10 Pt Caledonia—normal word spacing

Not enough lead — and too much lead: The first paragraph is set solid — there is no leading between the lines — and so it is difficult to read. By contrast, the bottom paragraph has fourteen points of leading, which is too much for most uses; the lines have so much space between them that they seem to fall apart.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it – a fact that is being proved daily all over America where art is bought. Today the

10 Pt Caledonia set solid

As an artist you have plenty of stimulating challenge for

your talent right where you live or close by. Art of high

quality and national significance is being produced every-

where. There is a job to do, as well as plenty to learn as

an artist, close to where you live – and you can be proud

of the company you are keeping. The "big stuff" is only

10 Pt Caledonia 14 Pt lead

Familiar and unfamiliar faces: The two paragraphs below are set in faces seldom used for long copy. For this reason they are like strangers, and the average reader will find them difficult or tiring to read. For most jobs that demand good readability you will be safer if you stick with familiar faces.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live — and you can be proud of the company you are keeping. The

10 Pt News Gothic Condensed solid

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live —

10 pt. Bodoni Bold solid

Letterspaced lower case: Another tool of the designer or typographer is letterspacing, but the paragraph below clearly demonstrates that it should never be used with lower-case letters or in a whole block of copy. The letters don't relate to each other to form clear, easy-to-read words. Each character stands alone, making the copy look more like an eye chart than a block of text.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live—and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it—a fact that is being

10 Pt Caledonia—letterspaced

All caps: The block of copy below, set in all caps, is quite hard to read. The use of all caps has a definite place in the designer's repertoire, but under most conditions does not make for easy reading.

AS AN ARTIST YOU HAVE PLENTY OF STIMULATING CHALLENGE FOR YOUR TALENT RIGHT WHERE YOU LIVE OR CLOSE BY. ART OF HIGH QUALITY AND NATIONAL SIGNIFICANCE IS BEING PRODUCED EVERYWHERE. THERE IS A JOB TO DO, AS WELL AS PLENTY TO LEARN AS AN ARTIST, CLOSE TO WHERE YOU LIVE – AND YOU CAN BE PROUD OF THE COMPANY YOU ARE KEEPING. THE "BIG STUFF" IS ONLY AS BIG AS THE ARTIST WHO DOES IT – A FACT THAT IS

10 Pt Caledonia—all caps

The maximum length of line: The first paragraph demonstrates a sensible length of line for good readability. Easy reading depends upon several factors — the size of the type, the amount of lead between lines, and the familiarity of the face. All must be taken into consideration. The lower paragraph, set 30 picas wide, is difficult to read — the eye has to travel too far from left to right and back to pick up the next line. The maximum length a line can be machine-set in most shops is 30 picas. Anything beyond that usually requires a certain amount of hand work and is much more costly.

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live

10 Pt Caledonia 1 Pt lead x 16 picas

As an artist you have plenty of stimulating challenge for your talent right where you live or close by. Art of high quality and national significance is being produced everywhere. There is a job to do, as well as plenty to learn as an artist, close to where you live – and you can be proud of the company you are keeping. The "big stuff" is only as big as the artist who does it – a fact that is being proved daily all over America where art is bought. Today the National Society of Art Directors has more than twenty-five member clubs in various sections of the United

8 Pt Caledonia set solid x 30 picas

A

B

C

Type Specimens — Times Roman

8 POINT Set Solid

Had our modern student chanced upon the bench of a monastery he would discov
er it furnished with forms arranged in methodical order to seat a large number of
scribes. The size of the edition in those days depended solely upon the number of
copyists employed upon the work and these were limited to the number of desks w
hich the scriptorium could accommodate. With the scribes once seated their writin
ABCDEFGHIJKLMNOPQRSTUVWXYZ 1234567890$
abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ

10 POINT Set Solid

Had our modern student chanced upon the bench of a monastery he wo
uld discover it furnished with forms arranged in methodical order to seat
a large number of scribes. The size of the edition in those days depended
solely upon the number of copyists employed upon the work and these w
ere limited to the number of desks which the scriptorium could accomm
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abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ

12 POINT Set Solid

Had our modern student chanced upon the bench of a monaste
ry he would discover it furnished with forms arranged in meth
odical order to seat a large number of scribes. The size of the
edition in those days depended solely upon the number of copy
ists employed upon the work and these were limited to the nu
ABCDEFGHIJKLMNOPQRSTUVWXYZ 1234567890$
abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVW

14 POINT Set Solid

Had our modern student chanced upon the bench of a m
onastery he would discover it furnished with forms arran
ged in methodical order to seat a large number of scribes.
The size of the edition in those days depended solely upo
n the number of copyists employed upon the work and th
ABCDEFGHIJKLMNOPQRSTUVWX 1234567890$
abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRST

18 POINT Foundry*

HAD OUR MODERN STUDENT CHANCED UPON TH
Had our modern student chanced upon the bench of a monaste

24 POINT Foundry*

HAD OUR MODERN STUDENT CHANC
Had our modern student chanced upon the ben

*Foundry type is set by hand

FAMOUS ARTISTS COURSE
Student work
Lesson 21
Studio procedures

HOW TO PRACTICE AND PREPARE FOR THIS LESSON

This lesson was planned to shorten your studio apprenticeship and help you start your art career more easily. If you were working in a studio, you would learn these procedures by doing them over and over again many times -- and the same holds true for learning them at home. It isn't enough simply to read this lesson -- you must practice doing these things until you feel comfortable doing them. Also, now is the time to develop habits of neatness and accuracy.

A large part of the work in this lesson deals with photographs. It's easy to find photos to practice on -- you probably have some duplicates in your own collection, or can obtain some from your local photographer or photoengraver.

In addition to materials you have used in other lessons, and what you will need for practice, you need the following for your assignment work for Lesson 21:

Mounting board or inexpensive illustration board -- 1 sheet, 10 x 12 inches; 2 sheets, 8 x 10 inches.

Mat board or illustration board -- 1 sheet, 10-1/2 x 9-1/2 inches.

Mat knife.

Zip-a-tone shading sheet or Craftint paper -- 1 piece about 8 x 11 inches (this allows room for practice). Study the demonstrations on pages 26 and 27 before you decide which method you wish to use. (See your catalog for a listing of materials.)

Rubber cement -- You can get this at a stationery, hardware, or art store. If you don't have a dispenser with a brush, get an inexpensive, 1-inch flat housepainter's brush. A rubber cement pick-up is convenient, but you can make one as described on page 6, Lesson 21.

Drawing instruments -- A ruling pen is all you actually need for your assignment work. However, to become proficient in the use of other instruments, you should get a set (see your catalog).

T-square and triangles -- For professional work, steel ones are best, but for your assignment work you can use the ones you have.

Pica rule -- It is desirable to have one, but not a must, since the measurements called for are simple. Remember, there are 6 picas to the inch.

Follow these suggestions for study and practice before doing your assignments:

1. Practice using your ruling pen as described on page 4 until you feel thoroughly familiar with it.

2. Work with rubber cement -- particularly in dry mounting, following the procedure demonstrated on pages 8 and 9.

3. Study the section on cutting mats on pages 12 and 13. Use scrap pieces of mat or illustration board and your mat knife for practice cutting. Be careful of your fingers -- mat knives are sharp. If you don't have a steel straight-edge you may use your brass-edged ruler. It isn't necessary to buy gummed tape -- masking tape will do -- or you may prefer to use the dry-mount method described in step 15 on page 13.

4. Restudy page 15 on rescaling. You'll find it helpful to cut out some ads from a magazine and practice enlarging (and reducing) them by the diagonal-line method.

5. Review cropping as described on page 19. Make a pair of right angles from bond paper or white drawing paper and practice with them until you are thoroughly familiar with their use.

6. Using your opaque retouch grays as shown on pages 22 and 23, practice retouching photos.

7. Study masking and flapping as described on page 24. Then mask and flap some of the photos on which you practiced retouching. Also, study the do's and don'ts on page 25.

8. Reread the section on typography beginning on page 28 -- study particularly the step-by-step procedure on pages 31 through 33 on copy fitting.

9. Look through various magazines and note how type has been used successfully through proper choice of face, spacing, line length, etc. You'll see that some examples work better than others. Study them objectively and try to analyze why they are better.

(over, please)

THE ASSIGNMENTS YOU ARE TO SEND IN FOR CRITICISM

ASSIGNMENT 1. This is an exercise in preparing photographs for reproduction. Cut out the two smaller photographs from Plate 1. Dry-mount each one separately with rubber cement on an individual 8 x 10-inch piece of mounting or illustration board. Then cut out the large photo and mount it on a 10 x 12-inch board in the same manner.

Photo A. In this picture of a man taking a photograph you are to remove the background, leaving the man and camera. Remove any light or dark spots from the photo, following the procedure on pages 22 and 23. Then carefully silhouette the camera as demonstrated on page 18. To silhouette the man's head and hands, you might wish to refer to page 22, step 2. Don't forget the inside areas between his face and the camera and within the camera itself. Last, decide where you want the picture to be cropped -- it should be somewhere behind the man's head at the left and about at the third finger on his hand at the bottom. Indicate this as shown on page 19. Because it is silhouetted you won't need crop marks for the right side of your photo. The silhouetted picture will be printed 2-1/2 inches high -- from the top of the head to where you crop it at the bottom.

Photo B. This photo should show how to measure and mark a board to a ten-inch length before cutting it. The photo will be reproduced 4 x 3 inches so your cropping must be in that proportion. Also crop the picture so it tells the story -- don't crop away important information. You can make the story clearer with careful retouching to bring out the ruler -- the edge of the board -- the pencil and perhaps the saw. Don't forget to remove any undesirable spots.

Photo C. In this picture you are to remove the parking sign and post from in front of the entrance to a fashionable suburban men's shop. To do this, follow the procedure on pages 22 and 23, taking great care to match the different values and textures of the wood, bricks, stone, and foliage. Remove any spots -- then crop your photo for reduction to a 4-1/4 x 6-inch vertical proportion.

After your work is completed on the three photos, mask and flap them in the manner demonstrated on page 24, and mark them for size.

Mark the backs of these pieces -- ASSIGNMENTS 1A, 1B, and 1C.

ASSIGNMENT 2. Make a simple pen or brush and ink drawing using Craftint or Zip-a-tone screens, as shown on pages 26 and 27. Use photo A as the basis for your drawing. If you wish, you may place tracing paper over the photo and trace the essential shapes of the camera and man. Use your pencil very lightly -- don't press into the soft emulsion of the photo. You will probably wish to make refinements and proportional changes in the man's head due to photographic perspective, which makes the back of the head and the ear look too small.

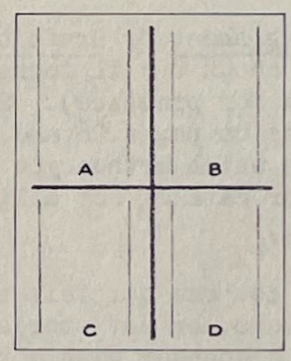
Remember -- keep your drawing simple -- black, white and one or two middle tones -- and don't use a screen on flesh areas. Make this a horizontal drawing 5-1/2 x 4 inches. With your ruling pen, draw a line around it about the width of a 1-point rule (see page 29).

When your drawing is finished, mat it with mat or illustration board in the manner shown on pages 12 and 13. Make this a "2 x 2-1/2 mat" as explained on page 12. Allow 1/2 inch of white space around your drawing; the opening in your mat should measure 6-1/2 x 5 inches. The outside should measure 10-1/2 x 9-1/2 inches.

Mark the back of this drawing -- ASSIGNMENT 2.

ASSIGNMENT 3. This is an assignment in copy fitting. Use the type specimens of Times Roman on Plate 2 and the typewritten manuscript on the yellow sheet, page 4.

On an 11 x 14-inch sheet of bond or visualizing paper, using a T-square and triangle, divide your sheet of paper into quarters with bold pencil lines. In the center of each quarter-section, draw two light vertical lines 18 picas apart. These will establish the width of your type columns. Label them A, B, C, and D as shown on the small diagram below.



Now, using the character-count method of copy fitting demonstrated on pages 31 through 33, cast the body text only of the typewritten manuscript on the yellow sheet, page 4. (Be sure to take an average count of several lines from the type specimen on Plate 2. In all type the count per line may vary slightly and an average is essential for a correct count.) Indicate the first four type sizes on Plate 2 as follows:

In Column A, rule the correct number of lines (as shown on page 30 of Lesson 17) that this manuscript copy would make if it were set solid (that is, with no leading) in 8-point Times Roman, u/lc (upper and lower case). Use pencil lines appropriate in weight for type of this size.

In Column B, indicate the number of lines and weight for 10-point u/lc with 2-point lead.

(Continued)

In Column C, use 12-point u/lc with 3-point lead.

In Column D, use 14-point u/lc with 4-point lead.

Under each column write the number of lines, type size and leading. (Remember that the leading will affect the depth of your copy block. For example, 10-point type with 2-point leading has the same number of lines per inch as 12-point type set solid. It would be marked 10/12.)

Mark this sheet -- ASSIGNMENT 3.

ASSIGNMENT 4. This is an assignment on how to mark instructions to the typographer or typesetter, similar to the example on page 33. Specimens of the type faces you will use are shown on Plate 2. Use the same yellow assignment sheet (page 4) that you used for Assignment 3, and in red pencil mark the manuscript as follows:

Headline: First two words in eighteen point Times Roman, upper and lower case; third word in twenty-four point Times Roman capitals with one point letterspacing.

Subhead: Fourteen point Times Roman, upper and lower case, on two lines, flush left, with four point lead between the lines.

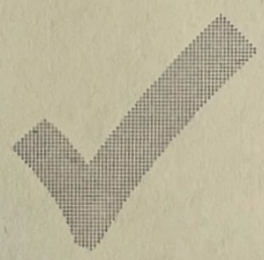
Body text: Twelve point Times Roman, upper and lower case with a one em paragraph indentation on the first line. Indicate this copy to be set 26 picas wide, flush left and right.

When you have finished marking this sheet remove it from your textbook and send it in for correction.

Mark this sheet -- ASSIGNMENT 4.

In criticizing these assignments, your instructor will consider:

--The accuracy of your scaling.
--How well you have composed or cropped and silhouetted and retouched your photographs.
--The neatness of your presentation.
--How well you have handled your Craftint or Zip-a-tone.
--The accuracy of your copy fitting and the clarity of your marking.
--The over-all knowledge you show of the subjects.



Check before mailing

IMPORTANT: Be sure to letter your name, address, and student number neatly at the lower left-hand corner of each assignment. In the lower right corner, place the lesson number and assignment number. For Assignments 1 and 2 do this lettering on the back of the boards.

Your lesson carton should contain:

Assignment 1 (A, B, and C)
Assignment 2
Assignment 3
Assignment 4
1 Return shipping label filled out completely

Mail this carton to:
FAMOUS ARTISTS COURSE, WESTPORT, CONN.

MANUSCRIPT FOR ASSIGNMENTS 3 and 4 (Elite typewriter face)

Headline: Art Markets EVERYWHERE

Subhead: Commercial and Editorial Artists
increasingly in demand

Body text: This year literally millions of drawings will be bought for magazines, newspapers, local and national advertising. Covers for magazines must be created. Thousands of magazine stories and articles must be illustrated every year. Pictures must be produced to sell the endless products advertised daily in magazines and newspapers. Creative art for titles and backgrounds -- animated stories and cartoons for commercials -- are desperately needed for the steadily growing field of television. Art must be drawn and painted for books, calendars, window displays, catalogues, direct mail pieces ... for posters, designs for packages ... to name only a few of the markets open to you, as a trained artist, no matter where you live.